A NEW METHODOLOGY

Operators have often struggled to find connections between user experience and what the network delivers. However, a new methodology makes it possible to introduce and monitor the right metrics. By continuously aligning these metrics with an ever-changing market situation and growing subscriber expectations, operators can place consumers at the center of investment decisions to improve user experience.
Operators are facing a fundamental shift as mobile networks move from carrying mainly voice traffic to data services and application usage. New applications, services and terminals are also being introduced on a daily basis. In this fast-changing environment, the ability to deliver a good user experience has never been more crucial as a competitive differentiator. Consequently, the focus among operators is shifting away from acquiring new consumers to retaining consumers and managing their ever-increasing expectations in terms of mobile service performance. This is one of the reasons for the rapid adoption of the Net Promoter Score (NPS) business metric, which measures loyalty to an operator.

At the same time, many operators are struggling with low NPS results, and they are finding it difficult to determine what to look for and what to improve – from a user perspective – in order to impact the NPS and optimize their mobile networks. For that reason, the NPS has proved to be difficult to put into operation. Operators therefore need a better understanding of which network and device parameters have the greatest influence on the NPS, and they require KPIs that correctly reflect the user’s perception of the performance of services and applications.

Ultimately, the only way an operator can strengthen the loyalty of consumers is to become more relevant. And being relevant means the operator must know its consumers better. All consumers are different, and this means that undifferentiated metrics are less effective when it comes to understanding and satisfying the demands of different consumer segments. Consumers have different interests, usage levels and requirements relating to a service, and consequently, these lead to different expectations. Operators therefore need to optimize the service experience in each defined segment; only then can they maximize the business value of each consumer.
Given this scenario, how should operators take on the task of improving the user experience of services? The first step is to adopt an outside-in approach that involves consumers to a much greater extent.

The key is to break down the user experience throughout the customer journey. Figure 1 illustrates this in terms of seven touchpoints. Every consumer will have an experience of the operator through these touchpoints. The goal of the operator has to be to understand the impact that each touchpoint has on the consumer’s loyalty/NPS value. It is important to realize this for every market and for every consumer segment.

However, Ericsson ConsumerLab research shows that different touchpoints have different impacts on the NPS [1]. One crucial factor that drives customer satisfaction is usage of mobile networks; in other words, the “use” touchpoint of the consumer journey. With an impact of between 20 and 40 percent of the overall NPS, this touchpoint is currently the key NPS driver among smartphone users.

Operators therefore need to better understand, influence and manage the “use” touchpoint. The challenge is to connect users’ subjective perception of the touchpoint to tangible, objective KPIs that the operator can measure and control. Doing this makes it possible to impact the user experience in a structured and systematic way.

Figure 1: The seven touchpoints of the customer experience journey.
Initiating an innovation program can help an operator understand where to focus its efforts. This has been shown with proof-of-concept projects involving two operators in different markets. Each project consisted of a cross-functional team with the aim of identifying specific KPIs that have a high impact on users’ experience of mobile data services – in this case, mobile video streaming and web browsing. Once the most important KPIs for those two services had been identified, relevant correlations were highlighted and KPI thresholds defined, resulting in concrete KPI experience ratings.

The teams began by collecting subjective measurements from selected smartphone users. Adequate tools were implemented in the operators’ networks to capture all metrics. Once these tools were in place, selected consumers performed dedicated mobile service testing over a certain period. While performing these video streaming and web-browsing tests, it was essential to capture their respective service experiences for every test carried out. All data from the networks, the terminals and the participants’ user experience was then transferred to and collected on an analytical platform. Furthermore, this data set was complemented with additional consumer data provided by the respective operator, as well as with data from a web survey conducted with all participants.

During the project period, data from thousands of video/web sessions, as well as terabytes of additional data, were collected, cleansed and correlated. Finally, in-depth interviews were held with selected participants to gain a better understanding of the results.

The data was cleansed and subsequently analyzed by a cross-functional team consisting of big data scientists and subject matter experts from areas such as network technology, research and consumer understanding.

RESULTS

The results show that KPIs – such as service load or buffering time – that are more closely related to specific services are more important than traditional network and resource KPIs. It is possible for operators to identify KPIs that are significantly correlated to consumers’ mobile user experience, and to decide the optimal service levels (thresholds) for each selected KPI.

The in-depth analysis also confirmed that there is a strong correlation between the KPIs and consumer experience, as illustrated in Figure 2a, which shows the density of observations and user experience ratings for different user expectations. Additionally, Figure 2b presents the Net Promoter Score (NPS) ratings, with higher scores indicating a better user experience.
between a positive usage experience of services such as video streaming and web browsing and users’ overall perception of and satisfaction with an operator’s mobile network. Furthermore, there is a strong correlation between a well-performing mobile network and the likelihood of a consumer recommending the operator – in other words, the NPS.

Figure 2a describes the experience thresholds for an “excellent,” “good,” “acceptable,” “poor,” and “bad” user experience for one of the most important KPIs identified. The difference between a “good” service experience threshold level (blue line) and a “bad” experience level (red line) is around factor seven, which shows that user experience threshold levels are not linear.

Another analysis proves that different user segments have very different expectations (threshold levels) in respect to what a “good service experience” actually means. Figure 3, for example, shows that “consumer segment 1” has much higher expectations with respect to the respective service performance compared with “consumer segment 2.” This difference could be interpreted as showing that the second segment places fewer demands on new technologies in relation to the specific service being tested.

Having this structured data and approach means operators can address and manage the respective user experiences of different segments by defining the required service level thresholds for every service and segment. This information also provides operators with invaluable input with which to invest in customer-experience-driven infrastructure.

An additional benefit of this approach is that it provides an overview of how the user experience rating correlates to the different smartphone models used during the study. This leads to a better understanding of which smartphones are better suited to certain mobile services and/or different user segments. With this knowledge, operators could offer heavy users of a specific service the right smartphone to optimize their user experience, as well as their operator loyalty.

![Figure 3: Different user ratings require different KPI levels for different user segments.](image_url)
BENEFITS – OVERVIEW

This approach of analyzing the correlation between the KPI and the user experience:
- identifies the service KPIs that have the most influence on the user experience, which in turn impacts the NPS
- helps to define KPI threshold levels for “excellent,” “good,” “fair,” “poor,” and “bad” user experience, and to map the threshold levels per customer segment
- enables operators to assess how different devices, network parameters and consumer touchpoints impact the NPS
- provides insights on an ongoing basis into how “subscriber DNA” evolves over time, and on what and where an operator should focus their efforts to improve the customer experience.

These two proof-of-concepts with operators in different markets prove that it is possible to correlate network and device KPIs with the user experience. Using this user experience correlation methodology, mobile operators can actively manage user experience, loyalty and NPS across different consumer segments in their respective markets in a structured and effective way by optimizing the identified relevant network and device KPIs.

However, in order to maximize the benefits of using this approach, the operator has to provide the right environment – an environment where this critical information is properly used in the company’s internal decision-making process. This is easier said than done. To trigger and execute the required overall transformation process across people, processes and tools, senior leaders across different organizational domains have to agree on, align and support the required changes. Once initiated, however, this methodology will provide essential support for executing action-oriented analytics, such as:
- providing input (such as KPI threshold definition) to other analytics and/or network management platforms
- identifying how performance ratings differ by device type and/or operating system
- aligning common goals between the CTO and CMO to jointly improve the user experience
- outlining and executing the right actions to improve customer loyalty
- implementing actions based on changing consumer usage pattern/needs (growing maturity)
- leveraging the KPIs and thresholds that have the most important impact on user experience to make optimal investments in network resources
- making the right prioritizations in operations, depending on which KPIs are perceived as being the most important for the operator’s customer segments.

Once this methodology has been established, it is important that the actions above are performed frequently – even up to several times per year. Doing so will enable operators to:
- capture growing user maturity as well as market opportunities
- follow up and reassess the KPIs and their threshold levels
- undertake cause-and-effect analysis of actions performed, such as investment decisions
- review the correlations made and rethink the conclusions drawn
- implement corrective or new actions if required.
Understanding what matters to consumers in different parts of the consumer life cycle is vital for operators. In fact, the alternative is not an option in today’s competitive environment. Operators that are serious about putting the customer first will start investing in drivers of customer satisfaction and loyalty. This has to be done in a more outside-in way, and should involve consumers to a much greater extent than ever before. The relationship with consumers needs to be strengthened to understand how different segments use operators’ services, and how this usage changes over time.

Analyzing the relationship between KPIs and the user experience provides the missing link by determining end-to-end data correlations. This enables operators to enhance their understanding of consumers’ experience of mobile services, and how this relates to network and device KPIs. It means that operators can be more selective when improving network and service performance, by addressing only selected consumer segments, services and geographical areas that matter to them.

And most importantly, by measuring and managing the KPIs that correlate most with the user experience, mobile operators can optimize the NPS by prioritizing and focusing on the most important KPIs in their specific markets.

However, this methodology should be executed frequently to enable operators to follow up on correlations made, reassess conclusions drawn, and implement corrective or new actions if required. It is essential for operators to do this, given that both their market and consumer base are continuously changing.
GLOSSARY

NPS  Net Promoter Score

REFERENCES


Net Promoter Score is a registered trademark of Fred Reichheld, Bain & Company, and Satmetrix.