

**Publication date:**

December 2024

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# Improving NPS: Stop Looking in the Rearview Mirror

Instead, look forward with  
real-time analysis of CX in  
three dimensions



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# Introduction

## The telecom industry is back to growth, albeit at a pedestrian level

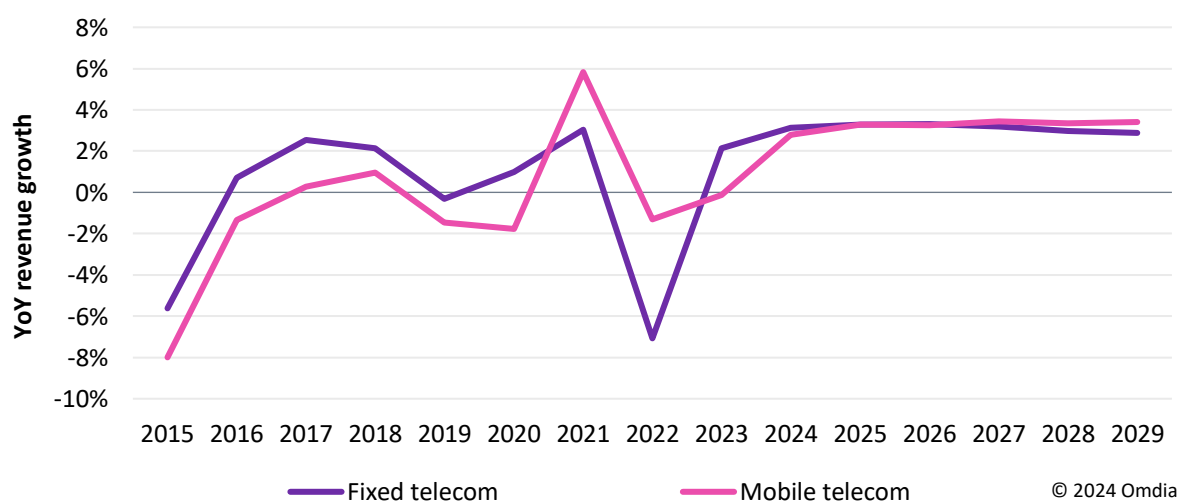
Global telecom (mobile and fixed) industry revenue reached \$2.0tn in 2023, up just 0.9% over 2022, as operators struggled to convince consumers and enterprises to spend more despite the inflationary backdrop in many countries.

Although Omdia forecasts industry growth rates will improve to around 3% in 2024, this is as good as it gets. We project growth rates remaining in the low single digits through the end of our forecast period (2029), as shown in **Figure 1**. Factors constraining telecom industry revenue growth include

- Intense competition as regulators oppose market consolidation
- Lack of innovation around new services and business models
- Reluctance to invest in new technology given uncertainty about the return on investment

Nonetheless, mobile and fixed broadband services will continue to be seen as necessities for customers in mature markets and transformational for those in developing countries. Moreover, operator margins and cash flow should improve as wage inflation wanes and capex is reduced.

**Figure 1: Telecom industry revenue growth rates, 2015–29**



Source: Omdia

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## Telcos must improve CX to have pricing power

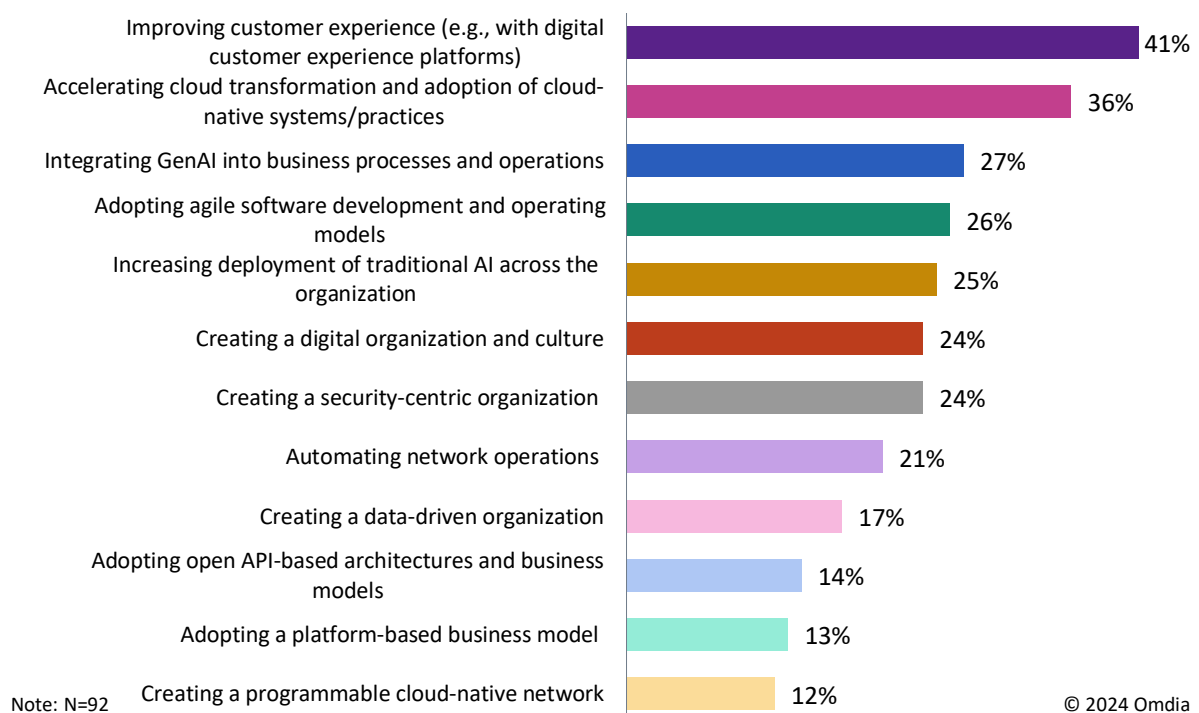
Beyond pricing, differentiation is currently difficult for telcos. The commoditization of telco products means that disrupters typically focus on discounting. The only way out of this “race to the bottom” is for telcos to focus on customer experience (CX), spanning areas such as

- Customer service and support
- Personalized products and services
- Loyalty/rewards programs
- Network performance (ability to stream video content, etc.)

Operators are often under pressure to improve CX given woeful comparisons with digital natives such as Apple and Amazon and even mature adjacent industries such as financial services and retail.

As shown in **Figure 2**, in a recent Omdia survey, CSPs ranked improving CX as the top priority for digital transformation. Omdia’s *Service Provider Digital Transformation Strategies Survey – 2024* also highlighted that telcos need to leverage AI and data analytics, cloud connectivity, and flexible operating models if they are to become more customer centered.

**Figure 2: What are your organization’s top digital transformation initiatives?**



Source: Omdia’s Service Provider Digital Transformation Strategies Survey – 2024

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# Survey-based NPS is a blunt instrument

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Telcos cannot improve CX if they cannot measure it. Like most businesses, telecom operators attempt to measure customer satisfaction (CSAT) through surveys that ask customers whether they would recommend the company to a friend. Subtracting the percentage of respondents that would not recommend from the percentage that would yields a Net Promoter Score (NPS).

Other questions that might be asked in an NPS survey include

- How likely customers are to continue to use the service (propensity to not churn)
- How likely customers are to consider new offers (e.g., a home broadband service for an existing mobile customer)

Omdia research has found at least a dozen telcos that disclose NPS in their financial reports, as shown in **Table 1**. Most of these companies provide information on NPS at the business unit level—typically consumer or business—with some revealing results by customer segment, such as those taking more than one product (fixed-mobile convergent) or those that are members of a loyalty program. Only a handful go a step further and explain how they link NPS to staff or executive remuneration and/or assign NPS a weighting toward the success of the company's transformation.

**Table 1: NPS metrics mentioned in the financial reports of certain telcos**

Company	NPS measure
Axiata	Country (“number one operator” in X market); business segment (e.g., data analytics / AI)
BT/EE	Business unit (retail, wholesale, business); customer segment (e.g., users that migrated to new EE digital services).  Group NPS counted toward executive annual bonus and transformation scorecard progress (20% weighting)
Deutsche Telekom	Business unit, customer segment (e.g., loyalty program users)
KPN	Business unit (consumer, business)
Orange	Business unit (enterprise, network); business segment (e.g., digital & data)
Proximus	Business unit (mobile, fixed, enterprise); customer segment (e.g., convergent users).  Group NPS determines Strategic Goal success (5% weighting)
Swisscom	Business unit (network, e.g., “Stability NPS,” consumer, fixed)
Telkomsel	Business unit (consumer, business)
Telstra	Episodic NPS across entire business  Employee NPS counted toward all employee bonuses and T25 Transformation targets
Telefónica	Business unit (B2B, B2C, network); employee NPS; business segment (e.g., contact channels)  Group NPS counts toward short-term variable remuneration of all employees (10% weighting) and as measure of success of Telefónica’s strategic plan implementation
Virgin Mobile	Management receives monthly updates tracked across entire business
Vodafone	Business unit (consumer, business); customer segment (e.g., convergent users); business segment (e.g., shared operations).  Group NPS counts toward executive directors’ annual bonus

Source: Omdia based on company financial reports

## Shortcomings of NPS surveys

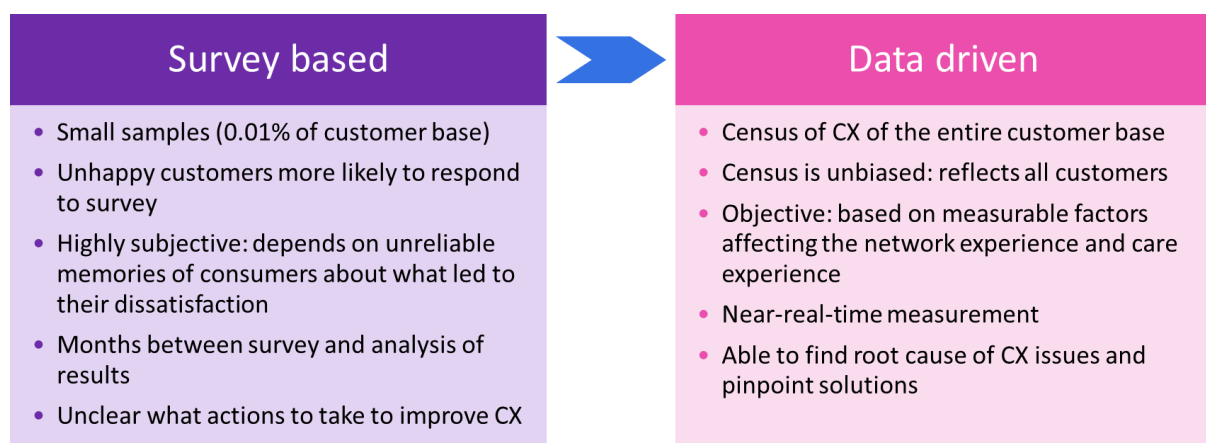
Most telcos still use a traditional survey approach to measure NPS, asking customers to rank their experience from 0 (not at all likely to recommend) to 10 (extremely likely). This approach can identify whether CX is improving or deteriorating, but it suffers from several limitations:

- **Small sample size:** Surveys are expensive to undertake. That being the case, an operator with 20 million subscribers might only survey 2,000 of them—a 0.01% sample size. This small sample size might not give an accurate picture of CX across the entire customer base. Moreover, it might be subject to bias: detractors are more likely than promoters to respond to a survey.

- **Long periods between measurements:** Surveys are typically conducted quarterly, so the time between detecting a problem with CX, implementing a change, and seeing whether that leads to an improvement in NPS can be more than a year. This severely limits the ability to optimize CX.
- **Unclear what is affecting CX:** Survey-based NPS does not provide the context or background to a customer's good or bad reported experience. For example, was it related to network performance or due to a billing error? It can be expensive to follow up with detractors to understand what caused their dissatisfaction. Even if you do, will they remember the cause?
- **Unclear what action to take:** Without the proper context, it is difficult for operators to pinpoint the root cause of dissatisfaction across the end-to-end customer journey and decide on the most appropriate actions to mitigate poor CX. This can result in unnecessarily high capex and opex as operators cast a wide net to try to resolve issues. Capex could be optimized if the operator knew the location of the customer at the time they suffered bad network performance. The perceived bad performance might be entirely unrelated to the network: it could be caused by the use of an unsupported smartphone model or a third-party application with limited server capacity, and a survey will not spot this. Without understanding the root cause of customer dissatisfaction, operators cannot make well-informed decisions that enable them to improve their NPS in a cost-effective manner.

In summary, periodic survey-based NPS measurements do not provide a very useful measure of CX. They are backward looking, not real time. They do not cover the entire customer journey from product selection to usage and after-sales care. They provide limited insight into the cause of dissatisfaction and therefore do not enable the operator to identify the root cause of the problem. Survey-based NPS is a classic case of trying to manage a business through a measure that is easy to make rather than one that provides actionable insight. What is needed instead is a data-driven approach to CX measurement as summarized in **Figure 3**. We explore this data-driven approach in the next section.

**Figure 3: The advantages of a data-driven approach to CX measurement versus surveys**



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# Looking at CX in 3D

For the effective management of NPS and customer experience, operators need a system that is integrated with their existing operational systems and processes and can resolve problems in a closed-loop manner. This measure of NPS should cover three dimensions:

- **Network experience:** for example, measuring dropped call rates, call setup time, voice quality (mean opinion score), video buffering time, time to first byte, and so on
- **Customer care experience:** for example, analyzing calls to the contact center to determine customer sentiment and quality of service provided by the agent
- **Product fit:** for example, detecting whether customers are struggling to access the most suitable package for their needs

With a more accurate measurement of the cause of bad (or good) CX, the operator can make the necessary adjustments, potentially in an automated fashion. For example:

- **Network:** inferring CX in real time from network data and leveraging AI to mitigate problems through network optimization in near-real time rather than months after a survey is conducted
- **Customer care:** leveraging AI to make personalized recommendations; predicting churn based on usage patterns and making proactive outreach to retain VIP customers
- **Product:** identifying whether the customer's product will have the best total lifetime value and, if not, offering the right product at the right time through the right channel and in a personalized manner (e.g., a delivery driver that makes many short calls each day could be identified by their phone usage and, potentially, by their heavy usage of a navigation app and be offered a package with extra voice minutes that best fits their needs)

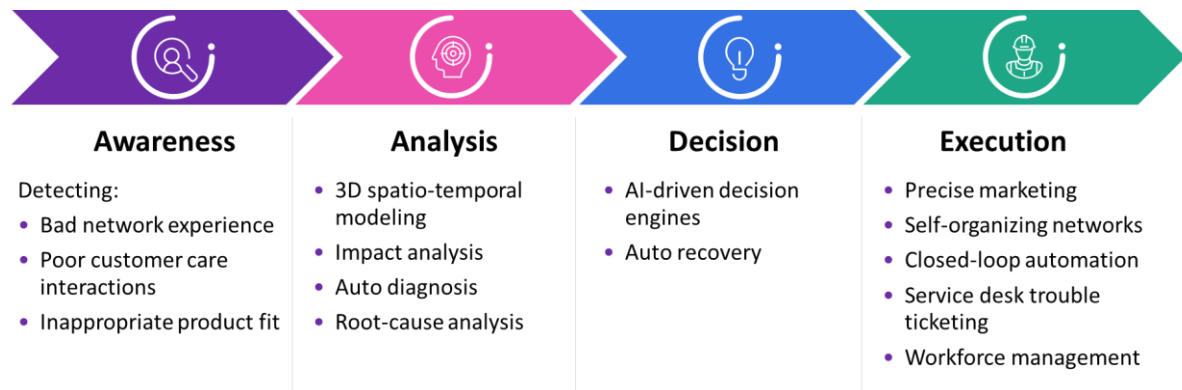
Analyzing a combination of network data (e.g., dropped calls), care data (e.g., complaints), and user behavior (e.g., regular overage charges) can enable telecom operators to build a better understanding of their customers, identifying potential NPS detractors and, most importantly, knowing what to do to turn these unhappy customers into loyal brand advocates.

As indicated by **Figure 4**, this CX analysis must fit into a broader framework of customer satisfaction improvement that starts with improving awareness, results in optimal decision-making, and supports the execution of the system's recommendations.

By looking at CX across the three dimensions of network, care and product, and coordinating NPS improvement strategies across departments, CSPs can significantly improve customer satisfaction.



Figure 4: Customer satisfaction improvement framework



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## Digital twin for network usage

By creating a digital twin of the network, CSPs can pinpoint the cause of a bad experience, both location-wise and in time. Precisely identifying the source of the problem enables the CSP to resolve it (e.g., by adding capacity) more cost-effectively.

This digital twin can be fed by data from fault, performance, and configuration management systems; charging platforms; and probes. Bad experiences do not only occur at the network level. Therefore, operators must use probes to generate several CX indicators including those that reflect the experience of applications such as VoIP and video streaming.

With a digital twin, an operator can perform time series analysis, replaying the model of the network to identify what specific network issue led to a bad customer experience, even when that complaint was reported to the call center hours after the incident took place.

By collecting data from many sources, CSPs can prevent the recurrence of temporarily bad network experiences. Moreover, a customer experience indicator can be created for subsets of customers (e.g., VIPs) or even for individual subscribers (very VIPs).

## Digital twin for care

Digital twinning is not just for networks. A digital model of customer behavior can be established based on a customer's interactions with customer care and commercial channels (stores, websites, etc.).

This digital twin can then be used to simulate various marketing and service scenarios and test customer responses in advance to enable optimized decision-making. Customer profiles and behavior analysis can provide the basis for personalized product and service recommendations, leading to a better product experience.

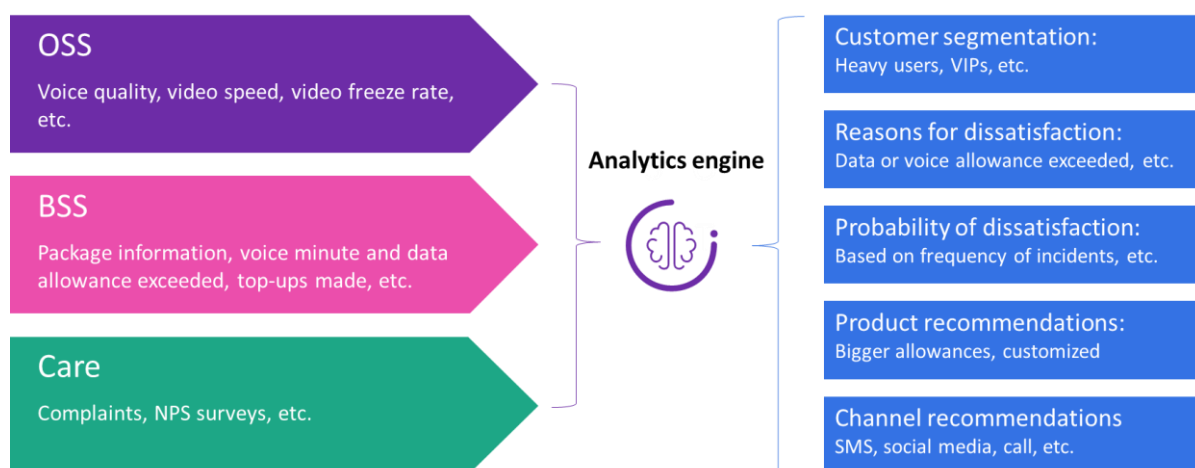
## A data-driven approach to product fit

To obtain a holistic understanding of customer experience, operators must feed their management system with high-quality data from several sources, as indicated by **Figure 5**.

Through their analytics engine they will then be able to identify the risks of dissatisfaction for different customer segments (e.g., VIP users) that have different needs. Some customers prioritize fast download speeds, others require low latency, and others want service reliability.

Understanding the reason for dissatisfaction will enable the operator to determine the most appropriate product for customers and even the most appropriate channel through which to offer it.

**Figure 5: Determining product-related CX and recommended actions**



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# China Mobile's data-driven approach to CSAT

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China Mobile's subsidiary in the province of Guangxi serves more than 30 million customers. The company's traditional customer satisfaction management process relied on questionnaires. These surveys were not frequent enough for the company to rapidly identify changing customer requirements. In addition, it was not always clear what actions the company should take to improve customer experience based on the survey feedback.

To address these shortcomings, Guangxi Mobile developed a comprehensive customer satisfaction management solution based on the customer journey (purchase, use, sharing) for mobile, fixed broadband, and enterprise services. The solution examines customer satisfaction in three dimensions:

- Products and tariffs
- Network experience
- Customer care experience

The solution analyzes large volumes of data using AI technologies. This enables it to identify user groups with low satisfaction scores and understand the unique characteristics of these user groups. After in-depth analysis, the system can recommend targeted optimization measures to improve products, the network, or customer care.

## Addressing the three dimensions of CSAT

Guangxi Mobile's customer experience transformation strategy makes improving customer acquisition and satisfaction the core goals of the company. Customer satisfaction is the top KPI against which management is measured. Improving customer satisfaction is a joint responsibility of the network, IT, and customer service departments, although ultimate responsibility lies with customer service. Guangxi Mobile's solution addresses the three dimensions of customer satisfaction management as follows:

- **Products and tariffs:** The solution identifies potentially dissatisfied customers by considering various factors, such as overage payments for voice or data. It then provides personalized product recommendations to customers (e.g., a tariff that will include more data and save the customer from overage charges). It does this through the most appropriate marketing channel—be it an SMS, an email, or a customer representative—the next time the subscriber enters one of the operator's stores.

- **Network experience:** A customer experience index (CEI) is built for each phase of the customer journey. The customer's network usage is analyzed, and potential detractors are identified. The system can identify the root causes of their poor network experience and hence determine what steps need to be taken to remedy it. For example, Guangxi Mobile employs three optimization approaches: network optimization, network-planning recommendations, and individual-level repair suggestions.
- **Customer care experience:** The solution considers factors that could lead to customer dissatisfaction in stores (e.g., having to wait a long time to be served), in electronic channels (website, smartphone app), the call center, and in outbound marketing (e.g., too many emails being sent). These factors are measured and analyzed so the solution can make service improvement recommendations to enhance the customer experience.

## Benefits of data-driven approach to CSAT

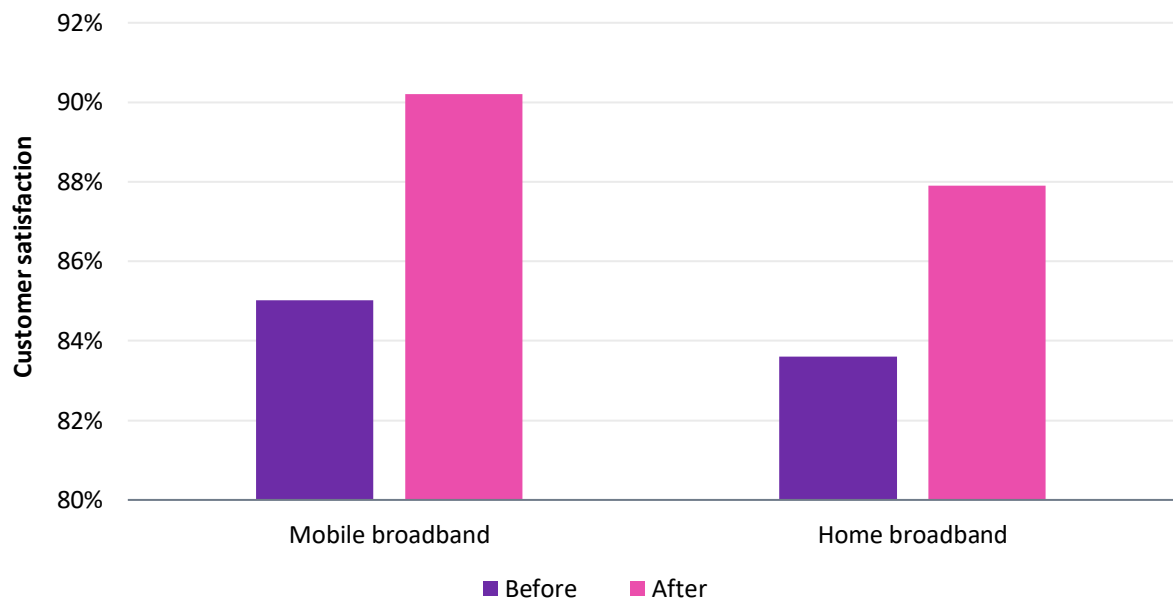
By moving from a survey-based approach to customer satisfaction management to a more data-driven and real-time approach, Guangxi Mobile has been able to improve customer satisfaction in a fiercely competitive market (see **Figure 6**).

The solution continuously analyzes customers' requirements, ensuring their products are the best fit. If they are not, it makes personalized recommendations for alternatives. It tracks their network experience, identifies the root cause of any quality issues, and recommends corrective and preventive measures to optimize the network experience. It does this in an efficient manner such that the investments that are made in the network are targeted to have the greatest impact on converting detractors into promoters rather than being spread equally across all users. According to Guangxi Mobile, by addressing the network issues of just 14% of subscribers, it was able to achieve a 60% reduction in the number of detractors in its NPS survey.

With the right product and a great network experience, there is usually little need for customer care. However, when issues do arise (e.g., a query about billing), the solution is able to track the customer care experience and identify areas for improvement.

All these efforts to improve customer satisfaction serve to build the foundation for brand loyalty and increase the lifetime value of customers.

Figure 6: China Mobile Guangxi customer satisfaction before and after implementation



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Source: Omdia based on Huawei presentation

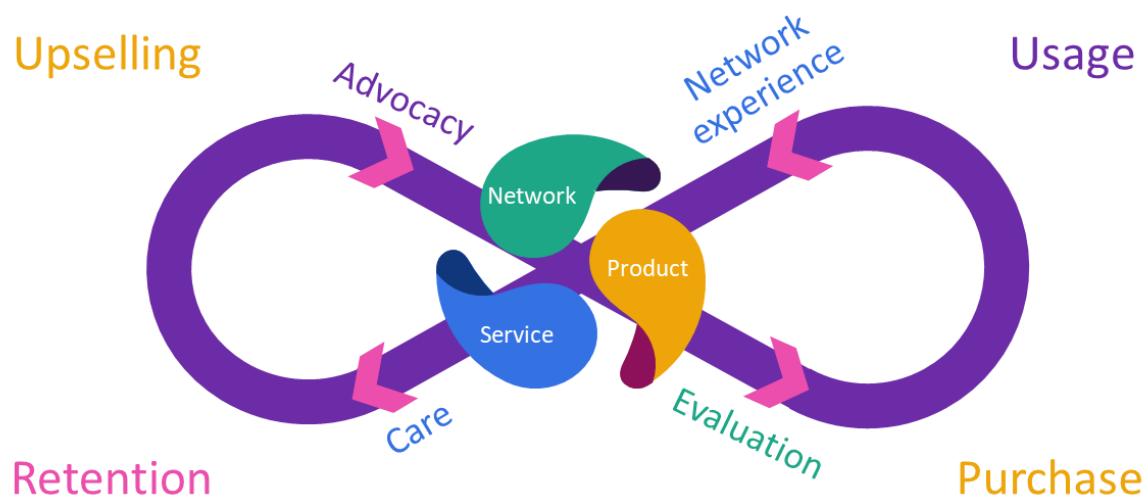
# Conclusions and recommendations

Using survey-based measures such as NPS to manage your business is like driving by looking in the rearview mirror: it is only good for going backward. Instead, operators must develop forward-looking vision that can sense in real time the quality of network experience and how good the customer care experience is. In parallel, they should be looking for indicators that the products their customers are using are the most appropriate ones that will engender brand loyalty.

A data-driven approach to CX management can help service providers identify potential detractors and convert them into promoters. This will benefit the top and bottom lines of their income statements as they win new customers, increase ARPU, and reduce churn.

This data-driven approach should cover three perspectives: network experience, customer service experience, and product fit, as indicated by **Figure 7**. It should cover the entire customer experience lifecycle: the selection and purchase of products, their usage, and the efforts made to retain and upsell the customer.

**Figure 7: Customer experience lifecycle**



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Source: Omdia

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Machine learning and even large language models can be used as part of a CX management system that supports intelligent marketing and problem identification. Combined with these technologies, 3D spatio-temporal modeling allows for deeper insights into customer experiences by adding the dimensions of location and time to data analysis. Knowing whether the cause of a poor NPS relates to a bad customer care experience or to network quality, and where and when the bad experience took place, can enable operators to fix issues that affect NPS quickly, cost-effectively, and with precision.

Independent verification of your customers' satisfaction through NPS surveys can still have a role to play. But to improve NPS, operators need real-time analytics that cover the entire customer lifecycle. With such a platform the marketing, customer care, and network operations teams can work together better to retain, upsell, and delight their customers.

# Appendix

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## Methodology

This paper is based on the authors' knowledge of the telecom market and makes use of numerous Omdia publications that are part of the Telecom Software & AI Intelligence Service and the 5G and Broadband Pricing and Strategy Intelligence Service.

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