AI and ML are transforming customer satisfaction by enabling the use of CEIs

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Customer experience indexes (CEIs) are used to measure and analyse the customer experience. Communications service providers (CSPs) have historically not used these metrics due to the large computational effort required to generate them for each individual customer; they have instead relied on retrospective measurements such as the Net Promoter Score (NPS) to assess customers' satisfaction. However, advances in artificial intelligence (AI) and machine learning (ML) technologies now make CEIs a plausible option. Ericsson, Huawei and Nokia are among the vendors that are developing CEI models, and wider adoption across the market is imminent.

CEIs allow CSPs to address issues before they have an effect on the customer. This improves the customer experience and reduces operational costs. Automating the process of identifying and rectifying issues not only enhances the customer experience, but also streamlines operations, so offers benefits for both customers and CSPs.

CEIs are becoming a viable option for CSPs due to progress in AI/ML

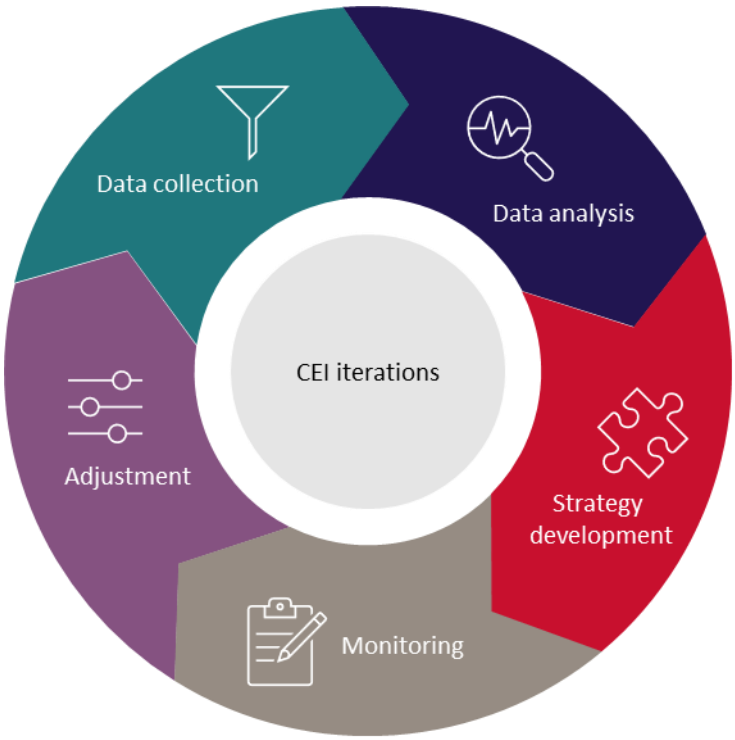
CEIs provide a comprehensive view of the customer experience by assessing hundreds of parameters that contribute to how customers perceive their service, such as network coverage, quality and price, and applying weighting based on importance.

All CSPs face network performance issues, but not all issues have the same impact on customers. CSPs can use real-time monitoring and anomaly detection to continuously observe and improve network performance and provide a seamless and consistent customer experience. CEIs highlight the most impactful problems and provide support staff with the knowledge to rectify them. In the past, this has been exorbitantly expensive due to the computational costs, data costs and time taken to train the algorithms needed for a CEI-type approach, thus rendering this method impractical. However, the cost of compute and storage is falling, and AI/ML can be used to automatically train the algorithms and learn from training data.

AI/ML enables CSPs to monitor 100% of the network data from every source (such as connections, devices, radio networks and core networks) to provide a single view that can identify issues in multiple domains and environments. ML can use adaptable algorithms that take trends and other variabilities into account to analyse the full scope of data, and can even predict problems before they occur.

Vendors such as Ericsson, Huawei and Nokia all currently offer advanced CEI models. Nokia's AVA solution is already used by CSPs such as Ooredoo, stc and Swisscom. These models use AI algorithms and data from multiple touchpoints to gauge and improve customer experience. They analyse customer feedback, network and service KPIs and device usage to predict potential issues and provide real-time amendments (Figure 1).

Figure 1: Overview of how a CEI model works



Source: Analysys Mason

CEIs can be used to overcome the limitations of NPSs and other customer care drawbacks

CSPs have traditionally relied on NPSs (based on post-event surveys) to gauge the customer experience. However, capturing customer sentiment after issues have occurred has limitations; a delayed picture of customer satisfaction cannot fully represent the complete customer experience. Furthermore, NPSs rely on customers reporting issues, while CEIs take every aspect of the customer experience into account. As such, CEIs can pinpoint specific areas where customers encounter faults, thus enabling CSPs to make targeted rectifications. These changes can, in turn, increase the NPS, because they can address the most pressing issues that the majority of customers face.

Customer care agents frequently serve as the initial contact for frustrated subscribers, but the lack of real-time, subscriber-specific data creates a blind spot for these agents. Consequently, they struggle to pinpoint the problem and address the issue. The increasing complexity of telecoms networks and services means that more effective network and service management is required to deliver superior a quality of experience to customers; customers' problems must be proactively anticipated and resolved.

CEI models also provide a way to reduce overhead costs by resolving issues before they arise, thereby decreasing the number of complaints. Indeed, the ability to fix problems that affect a large number of people via automation removes the need for large numbers of customer care personnel to sift through individual complaints and calls. This foresighted approach lessens CSPs' dependence on call centres and speeds up the response to service degradations.

CSPs should consider using AI/ML-powered CEI models to perform in a competitive market

The ability to adjust network operations based on real-time data helps CSPs to maintain their service quality because they do not have to rely on individual customer representatives to identify and amend network problems. Connecting network events and customer experience can transform assurance processes and revolutionise network planning and customer care. The move from call centres to CEI models has been propelled by the developments in AI and ML; CSPs no longer have to bear the high operational expenditure of extensive customer service staffing, while simultaneously improving customer satisfaction.

A sophisticated CEI model leads to improved customer satisfaction and loyalty, which can enhance customer retention and reduce churn. Customer experience is a priority for customers, especially those in countries where there is little differentiation between CSPs' plans and services (such as in the UK). CSPs that focus on delivering exceptional customer care can distinguish themselves in a competitive market, thus driving long-term success.