Autonomous Customer Care

The Nokia Autonomous Customer Care solution uses emerging technologies like artificial intelligence (AI), machine learning, speech recognition, natural language processing (NLP), natural language understanding (NLU) and bots to enhance the delivery of omni-channel customer care.

Regardless of the channel — agent-assisted care, self-care, interactive voice response (IVR) systems or instant messaging tools — the Nokia Autonomous Customer Care solution provides communications service providers (CSPs) with an evolution to zero-touch customer care.

Interactive bots provide an ideal channel for customers experiencing common issues that have simple solutions. For many CSPs, it is these common issues that drive a large volume of help desk calls. Proactive bots can be used to identify service-affecting issues and fix them automatically, without any interaction between the customer and a traditional support channel. By automating certain types of transactions, highly-trained customer service representatives (CSRs) are free to handle more complex tasks or to provide premium technical support.

The Nokia Autonomous Customer Care solution also leverages the vast quantities of network and subscriber data collected by CSPs. These analytics are collected, analyzed and used to create valuable insights about customers’ experiences, preferences and predicted behaviors. These insights are then used to improve the speed and accuracy of calls handled by CSRs, minimize the number of help desk calls that require human intervention and proactively fix problems before the customers are even aware of the issue.
Key features

- Autonomous customer care, powered by AI, machine learning, speech recognition, NLP, and NLU
- Interactive and proactive bots handle common customer issues that have simple remediation procedures
- Interactive bots work seamlessly with other care channels, including intelligent virtual assistants (like the Amazon Echo), web-based chat or instant messaging tools (like the one embedded in Facebook) and are supported by common troubleshooting workflows
- Vast quantities of network and subscriber data create valuable insights about customers’ experiences, preferences, and predicted behaviors
- Dynamic Intelligent Workflows predict the optimal sequence of tasks that should be taken to resolve an issue, adapting the sequence for every customer’s unique situation

Key benefits

- Improves the speed and accuracy of calls handled by CSRs
- Minimizes the number of help desk calls that require human intervention
- Allows highly-trained CSRs to handle more complex tasks or to provide premium technical support
- Lowers overall customer support costs and improves customer satisfaction
- Reduces the number of “silent churners”; customers who may not complain but are likely to churn after experiencing poor service
Overview

Tolerance for legacy customer care solutions is waning. There is an appetite for change and emerging solutions are generating substantial interest with consumers. Analytics provide the means to move toward autonomous customer care, by capturing and storing data from the network, customer premises equipment (CPE), trouble tickets and more. Through analysis of this historical data, algorithms can be developed to better predict service disruptions and take proactive actions to address issues before the customer notices or calls in.

The Nokia Autonomous Customer Care solution leverages the Nokia Service Management Platform (SMP) for the execution of workflows, which provide systematic instructions to ensure that remediation procedures are executed in a consistent manner. Figure 1 illustrates the various customer care channels that are available (left-hand side). These channels use various technologies to determine how to resolve customer issues in the most effective manner possible.

Interactive bots are used to provide an enhanced omni-channel customer care solution. Starting with agent-assisted customer care, bots can be used behind the scenes. While the CSR is speaking with the customer, the bot can be reviewing network and device information, accessing a library of use cases, pinpointing customer issues, and presenting CSRs with resolution options – all in real time.

By integrating interactive bots into self-care solutions, consumers can trigger automated processes that resolve simple problems or get basic information instantly via voice- or text-based intelligent virtual assistants. No more navigating through web sites, finding the right app on a mobile device or waiting in call center queues.

Bots can also be integrated with the interactive voice response (IVR) systems that are used to route callers to the right CSR or to provide real-time information. Most callers are frustrated with existing IVRs because they lack the ability to understand intent. One of the benefits of NLP is its ability to understand the literal meaning of customer requests. When properly integrated into IVRs, customers interact with a natural language interface, which improves the IVR system’s ability to understand their intent.

The determination of customer intent is supported in the Nokia Autonomous Customer Care solution with Intent Builder, an intuitive, drag-and-drop graphical user interface (GUI) that allows for the creation, testing and deployment of processes that use NLP and NLU to determine intent, then map it to the correct remediation procedure.

It is the ability to match subscribers’ intents to the appropriate remediation procedures that provides the key to unlocking the evolution toward autonomous care. Nokia has an extensive set of care troubleshooting workflows; which contain the appropriate remediation procedures. These workflows can be used for every channel in an omni-channel customer care solution, including agent-assisted care, self-care or autonomous customer care solutions powered by bots.

Based on machine learning, proactive bots can identify service-affecting issues and fix them automatically, without any interaction between the customer and traditional support channels. This proactive approach to customer care also reduces the number of “silent churners”; customers who many not complain but are likely to churn after experiencing poor service.
Detailed features

- Steers workflows with context-appropriate information, based on individual customer information, resulting in more rapid problem resolution
- Prescribes specific workflows to CSRs, using a recommendation engine that selects the next-best action (NBA) that has the highest probability of resolving a customer issue in the shortest time
- Identifies network issues more quickly by correlating incoming calls to the help desk with network, service and third-party application topologies to differentiate between the incoming calls that are related to possible service disruptions from calls about other issues
- Continues to optimize workflow performance with each subsequent transaction (using machine learning)
- Provides CSRs with visibility of steps that have been previously completed using any of the other channels in the omni-channel solution, to prevent duplication of effort
- Uses the NLP engine to recognize language, allowing consumers to use voice commands instead of having to physically access an app on a tablet or smartphone
- Maps subscribers’ voice- or text-based instructions to their intent, ensuring that the appropriate remediation procedure is executed
- Automates routine transactions and streamlines more complex ones, making significant improvements to the customer experience
- Identifies service-affecting issues and fixes them automatically, without any interaction between the customer and a traditional support channels
- Analyzes vast repositories of data, creating insights that can be used to deliver personalized services, power proactive care solutions and empower ever-smarter CSRs
- Provides common orchestration for all devices and all services across all channels — call center, self-care, field technicians and autonomous care — without the need to have knowledge about underlying systems or devices
- Supports thousands of interactive workflows, leveraging machine-learning algorithms from Bell Labs that make the workflows self-optimizing, dynamic and intelligent.

Nokia related products and solutions

- Nokia Service Management Platform (SMP)
- Nokia Cognitive Analytics for Autonomous Customer Care which includes Nokia Home Analytics, Nokia Care Analytics and Cognitive Analytics for Fixed Networks
- Nokia Connected Device Platform (CDP)
Learn more

Nokia Autonomous Customer Care solution is an integral component of the Nokia Customer Care Solutions portfolio. Nokia Customer Care lets you consolidate your device management and customer care activities across fixed and mobile services. It helps you reduce OPEX and total cost of ownership (TCO) while providing experiences that secure customer loyalty and boost your net promoter score (NPS).

With more than 10 years of experience, Nokia Customer Care has been successfully managing over 1.5 billion devices for more than 300 service providers worldwide in mobile, fixed, cable, MVNO and IoT environments. Nokia Customer Care Solutions have the largest device library in the market, recognizing 80,000 device models, for better device coverage in communications service providers’ networks. Nokia Customer Care also supports automatic device configuration for more than 15,000 device models from hundreds of the world’s top device/technology manufacturers.

Nokia Customer Care solutions deliver the best in customer experience with award-winning solutions that have delivered over €3B cost savings to our top ten customers.

We are the global leader in home, mobile and IoT device and service management solutions that simplify provisioning and care processes.

Our Nokia Customer Care Solutions support:

- More than 1.5 billion devices for 300 customers
- Approximately 1 million CSRs
- More than 2.5 billion workflow executions per month
- More than 10 million self-service sessions per month
- Learn more about Nokia Autonomous Customer Care at: https://networks.nokia.com/solutions/autonomous-care

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