

Lumen Technologies implemented an AI-enabled virtual agent to deflect IT tickets received via established channels (portal, phone, and chat) and maximize its mature knowledge base with self-service augmentation.

Virtual Agent Raises Self-Service Augmentation and Deflection Rates for Global Enterprise Service Help Desk

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Written by: Ali Close, Research Manager, Intelligent Finance and Customer Care Business Process Services

Introduction

Lumen Technologies Inc. is a U.S. multinational telecommunication company headquartered in Monroe, Louisiana. Formerly known as CenturyLink Inc., the company offers communications, network services, security, cloud solutions, voice, and managed services.

Lumen has made significant acquisitions over the years, including a 2017 acquisition of Level 3 Communications. At the height of this transaction, Lumen realized it needed to reassess plans for managing legacy systems and merging support teams. Service desk capabilities were all insourced at the time, and as the scope of integration work broadened following the acquisition, Lumen needed to revisit the ability of its small inhouse service desk support team to manage the volume of interactions coming from internal employees, contractors, and other affiliates. Lumen determined outsourced labor support and greater digitization of operations were the most effective means of reimagining its global IT service help desk.

In partnership with Tech Mahindra, Lumen outsourced its global service desk, which provides frontline support for the entire company across North America, Latin America, India, Asia/Pacific, and Europe. Services include tier 1 administrative support, L1 troubleshooting, and escalation management (managing a volume of over 25,000 monthly calls, chats, and web tickets). Tech Mahindra supports Lumen with 115 full-time employees located both onshore (Louisiana) and offshore (Pune, India), including multilanguage support (English, Portuguese, Spanish). The contract also included implementing a chatbot solution/virtual agent to elevate self-service capabilities and deflect monthly contacts coming into IT. The virtual agent was a top-level, blue-chip item on the radar of Lumen senior executives as they looked to improve self-service utilization.

SOLUTION SNAPSHOT

ORGANIZATION:

Lumen Technologies

ORGANIZATIONAL CHALLENGE:

Lumen needed a more cost-effective, efficient global IT service desk and improved self-service capabilities for users.

SOLUTION:

Implementation of a ServiceNow Virtual Agent

PROJECT DURATION:

Six months (from development to launch)

BENEFITS:

- » Improved self-service utilization
- » Increased chat and ticket volume deflection rates
- » Agent reskilling/upskilling
- » Positive user feedback
- » Rich analytics and feedback mechanism for maximum optimization
- » Optimized knowledge search capability

Business Challenges

Lumen's service desk had been handling tickets that were received via established channels, including portals, phone, and chat. While Lumen had a mature knowledge base with a vast library of self-service articles, the adoption of self-service by end users was below average, and the company was keen to improve it. Specific pain points included:

- » Limited metadata tagging of knowledge bases, resulting in inaccurate search results
- » Lack of properly identified workflows and catalogs automation
- » Traditional service operations that were not digitally enabled
- » Low utilization of self-service resources

Implementation

Design plans for the virtual agent began in late 2020 with a joint effort between Lumen and Tech Mahindra. On the Lumen side, project ownership was spearheaded by IT, with sponsorship support from the executive team. Through each phase of design, concept, development, and implementation, a partnership approach based on trust and collaboration was key to execution.

Lumen and Tech Mahindra initially sought to leverage Tech Mahindra's chatbot capabilities. However, at the time, Lumen was also planning to leverage an improved licensing model with ServiceNow that would open access to new chat/virtual agent tools and capabilities. Therefore, it was decided Tech Mahindra's team would build out the ServiceNow Virtual Agent so Lumen could own and maintain the IP moving forward. As a prerequisite to developing the agent, ServiceNow Agent Workspace was implemented first. This is a graphical user interface that gives tier 1 agents a single view and access to basic agent tools.

Tech Mahindra and Lumen collaborated to develop the ServiceNow Virtual Agent to act as the first point of contact for chat users. Both teams worked together to identify use cases and workflows, core agent activities, and process flows to be baked into the virtual agent. Offshore developers were given access to the tool and developed the workflows in the ServiceNow environment, identifying over 30 self-service use cases (e.g., password reset, Microsoft Outlook issues, and create/track an IT ticket). Lumen IT leaders provided guidance and governance through development to ensure the solution continued to meet business needs. Key features of the virtual agent include the following:

- » Logs and auto-routes general incident tickets
- » Provides self-service augmentation through contextual knowledge search
- » Handles quick ticket status checks and expedited requests
- » Performs seamless handoff from virtual agent to live agent without losing chat context
- » Offers 24 x 7 availability of virtual agent
- » Supplies quick references to FAQs

On an ongoing basis, Lumen and Tech Mahindra work to identify and configure new use cases based on top call (chat) drivers, in addition to enhancing current workflows to further improve the user experience. With ownership of the virtual agent, Lumen plans to increase the resources to support the agent in the long term.

Areas targeted for improvement include:

- » Integration of virtual agent with Microsoft Teams
- » Update of ServiceNow platform to further improve workforce and process optimization (This will enable the AI search function to replace the contextual search to yield more accurate search results.)
- » Install conversational analytics for enriching virtual agent performance monitoring

Benefits

The virtual agent (named Sherlock) was fully functional by July 2021, with the first phase launching in August 2021. It included six use cases and related FAQs. The number of interactions handled by Sherlock increased from 1,941 in July to 2,172 in August, which represented 33% and 35% of total interactions, respectively. Lumen saw improvements in end-user satisfaction and speed to issue resolution.

Adoption of the virtual agent for augmentation of self-service and automation of common IT processes also resulted in the following outcomes:

- » **Increased volume deflection rate.** Lumen saw an increase of ~30% in chat volume from live to virtual assistant by July 2021.
- » **Positive user feedback.** Over 90% of customer survey responses indicate a positive user experience.
- » **Improved agent experience.** Live chat agents were transitioned to handling more complex interactions as the virtual agent took on most of the catch and dispatch tasks; seamless handoff between virtual agent and live chat agent without losing the context was also enabled.
- » **Enhanced analytics, monitoring, and KPI measurement.** Rich analytics and a feedback mechanism for maximum optimization were provided, and conversational analytics were implemented for tracking and monitoring the performance of the virtual assistant in real time.
- » **Optimized knowledge search capability.** Natural language understanding and optimized knowledge search capability enabled ease of interaction and self-service; utilization of the built-in capability of the ServiceNow platform provided users with a more accurate knowledge base search.

Methodology

The project and company information contained in this document was obtained from multiple sources, including information supplied by Tech Mahindra and questions posed by IDC directly to Lumen employees.

About the Analyst



Ali Close, Research Manager, Intelligent Finance and Customer Care Business Process Services

Ali Close is a Research Manager leading IDC's Intelligent Finance and Customer Care Business Process Services practice, which includes coverage of finance and accounting, customer care, procurement, and logistics business process outsourcing services. Ali focuses on research related to IDC's 3rd Platform, particularly in the areas of analytics, intelligent automation, platforms, and business process as a service.

MESSAGE FROM THE SPONSOR

Of late, Communication Service Providers are increasingly shifting their key focus of value from acquiring and building new businesses to growing their core business while reducing complexities across the value chain. This shift from “building the new” to “simplifying the core” and the rise of 5G is accelerating Telco’s digital transformation. Tech Mahindra is always celebrated by our Communication and Media customers for helping them manage the complexities introduced by new business models, customized content, and legacy platforms. Our heritage and strength in core Telco business and systems is ideally suited to this environment and is widely recognized by our clients and industry analysts. To learn more about how we are automating and simplifying advanced technology for telecom visit <https://www.techmahindra.com/en-in/communication/>

IDC Custom Solutions

IDC Research, Inc.
140 Kendrick Street
Building B
Needham, MA 02494, USA
T 508.872.8200
F 508.935.4015
Twitter @IDC
idc-insights-community.com
www.idc.com

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