Solving the Claim Status Question Through Automation:

Unemployment Benefit Claim Status Solution

Information Communications Technology Innovations

North Carolina

Department of Commerce, Division of Employment Security

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IDEA

The North Carolina Department of Commerce, Division of Employment Security (DES), provides an essential service to the workers and employers of the State by administering the Unemployment Insurance (UI) Program. Rapid increases in benefits and the expansion of eligibility associated with state and federal government mandated COVID-19-driven legislation have helped mitigate the impact of the downturn on residents but have also resulted in exponential increases in claims received by those seeking unemployment benefits. During the peak periods, NC DES received the same amount of unemployment claims in one week's time as what was previously received for the entire year prior to the pandemic. As a result, NC DES experienced an unprecedented volume of phone calls from claimants seeking assistance with their application for unemployment benefits. The amount received surged to more than 100 times normal volumes during the peak periods of pandemic, from 10,000 to a million calls a week.

To best assist those impacted by the economic crisis, NC DES scaled up its cloud infrastructure footprint instantly and expanded call center capabilities. The Division contracted with a third-party call center vendor to provide additional agents to better assist those seeking benefits. During peak periods in 2020, this escalated from a mere 75 in-house agent staff to as high as 2,000 agents being onboarded in a matter of weeks.

Upon further analysis of the calls, we found that the primary inquiry agents received was regarding the status of a claim. Of the incoming calls, this question accounted for approximately 30% of what was received. Different variants of the question were observed but the overall basis of the inquiries was constant, in that claimants wanted to know where in the review process their claim was, what possible issues were delaying approval, what could they do to help expedite the process, and when could they expect to receive benefits.

A seemingly simple question but due to inherent complexities of the unemployment claims processing, even for an experienced call center agent, it is difficult to glean this information from multiple screens swiftly and consistently. It was taking more than 10 minutes per call on these inquires, not counting the excessive hold times. Additionally, claimants were not being provided with prompt and consistent answers to this question from many of the new call center agents that were ill-equipped and insufficiently trained to handle these calls. That unfortunate reality forced claimants to make multiple calls in hope of hearing a better answer from a different agent, therefore creating a negative compounding effect on the overall call center operations.

The emergence of this issue presented an opportunity for NC DES to implement a capable solution that would expeditiously resolve the problems associated with a claimant's application status, as well as improve the overall customer experience. This was accomplished by implementing a self-service solution that regularly presents answers quickly and in a comprehensible language via multiple channels of communication with round-the-clock access. The solution implemented by DES was expected to reduce the need for so many additional center agents to assist claimants, thereby translating into a cost savings opportunity and better preparation by the Division to handle possible future surges in claims from disasters and various economic fluctuations.

NC DES embarked on this project with an aggressive target for completion that was made possible through considerable teamwork. The successful implementation of the claim status module is evident by the project timeline from inception to production in all channels of communication (IVR, Web, and Chat) being completed in just a six-week period. Under normal conditions, this project could have taken anywhere from six months to a year and possibility even longer. Overall, the project was successfully implemented as planned and Division staff was immediately able to begin tracking the daily metrics to measure the actual effectiveness. In the absence of the claim status solution, dissatisfaction amongst North Carolina citizens would continue to grow due to ongoing difficulties when seeking unemployment assistance.

In efforts to support the National UI Community, NC DES shared this idea and the solution details at the 2020 National Association of State Workforce's (NASWA) Annual Summit. There was a great deal of interest expressed in the solution, as most of the states were faced with a similar problem. The NC DES project team conducted detailed walkthrough sessions with multiple states to help replicate this innovative solution expeditiously into their respective environments.

IMPLEMENTATION

On an enterprise level, NC DES was able to achieve process improvement through enhanced system efficiency and an increase in customer satisfaction. To accomplish this, agile development was key to the project management approach to be able to implement a solution rapidly and within specific technical and business requirements.

The solution design goals established by the project team were:

- To build a self-service 'Claim Status' module capable of presenting an intelligible status message quickly and consistently.
- To build once and deploy it across multiple channels, initially IVR, Web, and Chat.
- To allow users to check their claim status anytime over the phone or online.
- To create a new mobile friendly screen that presents the 'Status' visually in one place.

This project perfectly aligned with the overall goal of serving customers efficiently and accurately in administering UI benefits. NC DES adopted agile methodology and created multiple sprints, one for each channel of commutation. This enabled completion of the functional requirements and its underlying architecture in less than two weeks' time, as well as the three channels (IVR, Chat and Web) of communication in two-week sprints each thereafter. The claims status module was implemented as a web service (API) that can be invoked from multiple channels. This module queries the UI database by looking for various conditions and claim issues. The initial logic checked for

IVR (Amazon Connect/ Lexbot)	SCUBI UI Benefits Web Application

Web API
Claim Status Module

SCUBI Sub Systems
(e.g. Oracle Database, OPA Rules Engine, Middleware, Service BUS, etc.)

12 different sub statuses on a lower, granular level. This logic continues to evolve with more granularity and improved status read outs with little to no disruption to the current processes and public interfaces. Extensive collaboration was essential to the successful implementation of the claim status module. Various IT, business, and call center staff across DES were engaged to work rapidly towards breaking down the complex claims process into identifiable stages and then map the myriad of substages to an easily understandable status description to answer the seemingly simple question, what is my claims status? This project demanded engaging with many teams from within the agency and from our technology partners, Capgemini and Amazon, to complete it on time as planned. The project was started on May 4, 2020 and went live on all three channels by June 9, 2020.
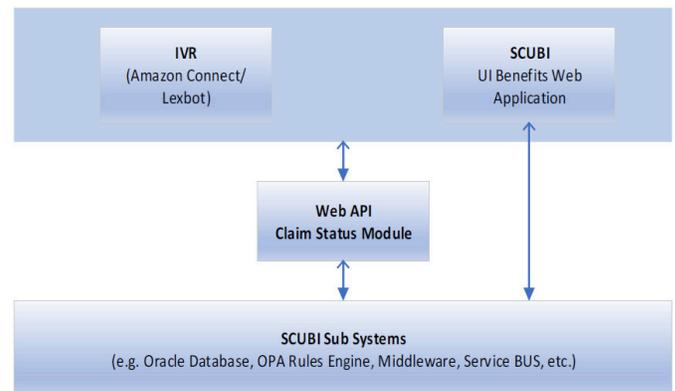
IMPACT

The key benefit of this solution was a decrease in caller volume, thereby allowing agents to assist more claimants on other types of inquiries and reduce wait times. Overall, the claim status solution has allowed NC DES to better assist citizens through improved productivity and customer satisfaction, better resource allocation, and reduction in costs. The Division was able to serve constituents any time of the day on multiple channels of communication reliably, quickly, and in an easy-to-understand language. The customer journey has been improved as depicted here:

1. Web Channel

In efforts to provide clear information on a claim status, the web portal is presented in a color-coded visual format with a status bar showing the high-level stages that a claim typically goes through during the review process. The different stages include:

- **Green** to indicate completed stage
- **Yellow** to indicate the current stage
- **Gray** to indicate possible future stages
- **Red** to indicate whether there are any significant issues impacting the claim progression

Another design feature of the claim status bar includes setting the width of each high-level status to represent the typical duration of each stage until it reaches completion. The different stages a claim goes through in the submission, review, and approval process include:

- Claim application
- Claim in review
- Claim in process
- Decision made
- Benefits exhausted

A claim status description is provided for each stage and dependent on the color it is coded to. This also serves the purpose of informing claimants of turnaround time expectations and any claim approval dependencies, therefore providing complete and thorough information.
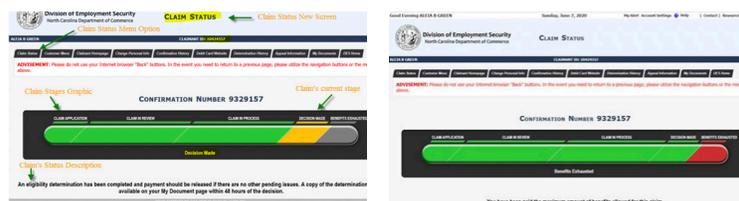
2. IVR Channel

The IVR channel allows claimants to check their claim status any time without having to wait in a queue to speak to a call center agent. For the system to locate an account and relay the application status, callers only need to enter or speak either their claimant ID, social security, or claim number. The system dictates a detailed message explaining the status of the active claim within seconds of the information entry. It also allows a claimant to play back the message multiple times in case any key information is initially missed. In instances where a claim is in a certain condition that requires an agent to speak with the claimant, the call will be directed to a live agent on a dedicated queue for troubleshooting. However, if this occurs during non-business hours, the caller will be instructed to contact the call center during normal hours of operations to speak with an agent for assistance.

DES Claimant Claim Status Self Service Call Flows
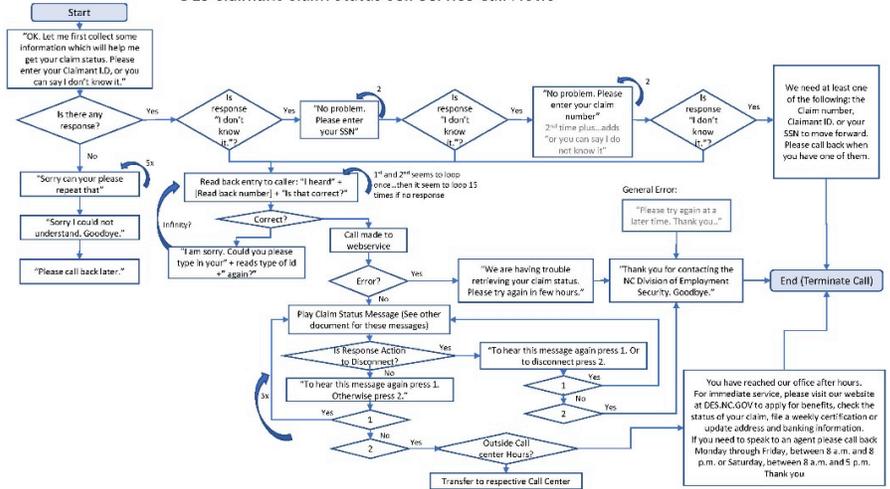
3. Chat and Chatbot Channel

Another element integrated into the system includes a robust FAQs section on the NC DES public facing website (https://des.nc.gov/) as a means for providing answers quickly to common questions. It also serves the purpose of offering an easily understood and detailed explanation of the UI benefits process. Many of the citizens who lost their jobs during the pandemic had their first exposure to the unemployment program, and therefore emerged with a widespread lack of knowledge about how to apply for benefits.
In consideration of the many questions by claimants due to their lack of experience with the UI benefits process, chatbots were also designed to offer a webchat option, allowing for quick responses to inquiries without having to contact a call center agent. The content of the webchat is updated regularly based on analysis of the variation in frequently received questions and searched topics. NC DES instilled numerous chatbots to help deflect the need for a live agent interaction wherever possible, thereby reducing the dependency and cost associated with the third-party call center vendor. Regular monitoring is conducted to ensure effectiveness of chatbot content is maintained, including tracking call deflection rates, and adding new chatbots as needed. Since deployment, NC DES has observed a consistent increase in the amount of self-served chat sessions being utilized.

Division staff immediately started tracking effectiveness of this program by daily measuring counts since going live. The self-service IVR channel went live May 25, 2020 and as of December 2020, there were 830,000 calls auto responded to with less than 5% of those calls being directed to a live agent for collecting any missing information. A couple days later the chatbot channel also went live and as of December 2020, there were 110,000 chat sessions auto answered, thereby deflecting the need for a claimant chat with a live agent. Finally, the web channel solution went live on June 9, 2020 and as of December 2020, there were 40 million-page views of the claim status screen. The total calculated savings of this automation was approximately $10+ million dollars in just a seven months' period. This figure is based on 30 calls/webchat sessions handled by a live agent per day at the daily estimated rate of $320.

In the environment prior to integration of the module, there was mass confusion and dissatisfaction amongst claimants. The previous system was not providing coherent and precise information about a claim status or the problems associated with an application, resulting in delays of benefits being issued and frustration by claimants. During times of economic downturns that provoke exponential increases in unemployment, it is fundamental to the success of state agencies that administer UI programs to have adaptive systems in place. That is a key characteristic of the DES claim status solution because of its scalable architecture and simplicity.

While there are many benefits to claimants, the solution also promotes better productivity and resource allocation from within NC DES. Financial and staffing resources can be utilized across other areas of need amongst the North Carolina UI Program to promote an overall improved experience by constituents. This also aids in exemplifying the agency by enhancing public opinion.

The solution is routinely refined to accommodate additional conditions associated with a claim status and to provide even more granular updates with actionable information from all established channels of communication. After the successful deployment of the claim status solution, NC DES continued to explore other opportunities to further enhance system efficiency and improve the customer experience. The most recent example of this is a project deployed in May 2021 to create a UI mobile app available on both Android and Apple devices. The app consists of features of the UI system claimants more frequently accessed as part of the application and review process. NC DES is also exploring other Robotic Process Automation opportunities to automate backend processes.

The detailed design of the claim status module and the resulting successful implementation into NC's UI Program, has gained recognition by fellow state unemployment agencies and created a model for them to replicate into their systems.

"As Iowa embarks on its modernization journey, we have looked to North Carolina Department of Commerce Employment Security to help in our efforts through collaboration and knowledge sharing which have been extremely valuable and inspiring, helping us generate ideas on how we can better serve our customer. Raju and his team have been excellent sources of knowledge and support, and Iowa will continue to learn from, and partner with NCDES in the future."

- Chief Information Officer Iowa Workforce Development, Neil Shah

NC DES is now recognized by the National Unemployment Insurance community through the innovation utilized in creating the claim status module. North Carolina has emerged as a leader amongst the community and continues to provide aid to other state agencies.

"Especially during the Pandemic, there has been a prodigious amount of superlative sharing by states across the nation, with one such example that by Raju Gadiraju, Chief Information Officer at NCDES, regarding Solving the Claim Status Question thru Automation. As is typical, this briefing spawned follow-up discussions between himself and other states' leadership in which Raju shared further details concerning the NCDES implementation. In graciously elaborating further, these other states were able to better implement similar services in thanks to Raju."

- National Association of State Workforce Agencies Technology Director, Lou Ansaldi

Considering the positive impact this solution has already provided to the NC UI Program and the National UI community, DES expects even more long-term success in tackling high unemployment during times of economic slowdowns. This is evident by the minimized strain on agency staff and reliance on outside resources, as well as revival of public opinion regarding the effectiveness of the overall system. The unprecedented unemployment environment provoked by the COVID-19 pandemic highlighted key areas of the UI Program in need of modernization. As a result, DES now has a solution in place for handling future occurrences of high claimant volumes to address and resolve inquiries about claim status and the subsequent issuance of benefits more efficiently.