

# Illinois Department of Employment Security AI Chatbot & Telephony Agent

Category: Emerging & Innovative Technologies



State: Illinois

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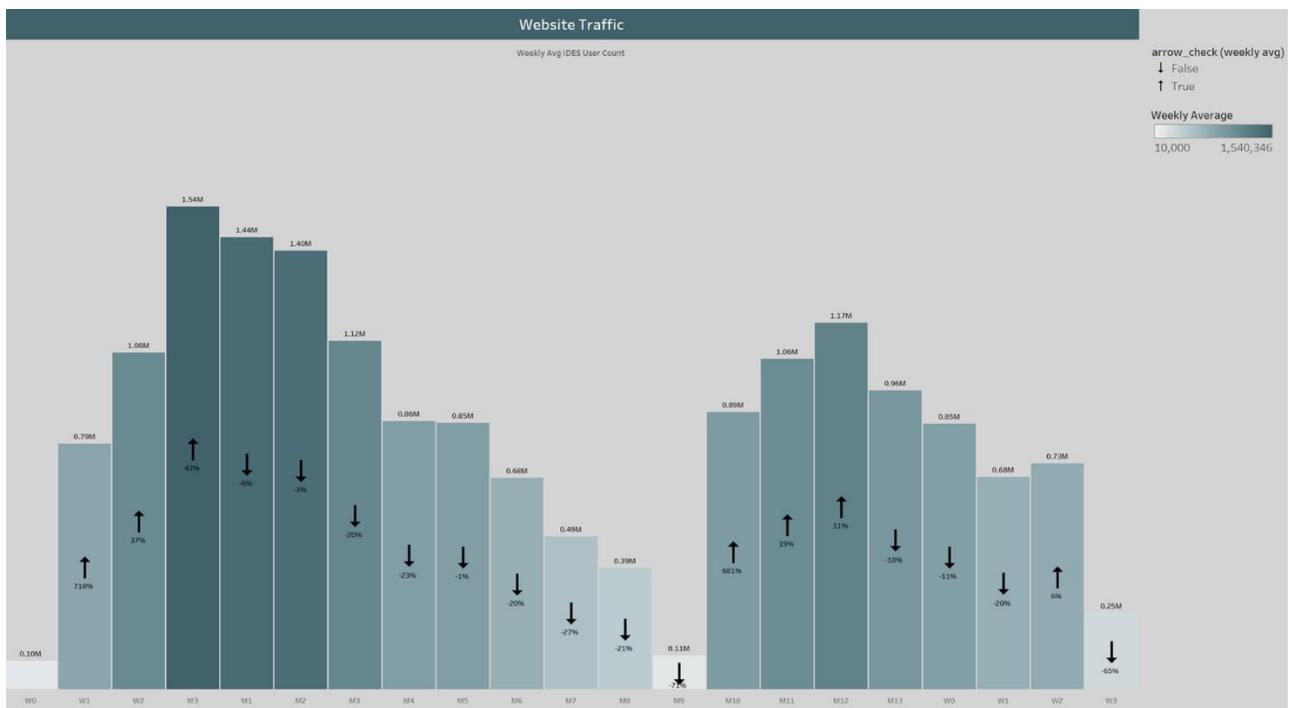


## EXECUTIVE SUMMARY

From the beginning of the pandemic the Illinois Department of Employment Security (IDES) was inundated with an overwhelming volume of calls. The volume of inquiries eclipsed the high expectations originally estimated. Call center volume for the department went from roughly 3,000 daily calls to almost 60k-70k daily calls within a few weeks. Website traffic for the department spiked from the previous 50,000 pageviews per day to as high as 1.9 million pageviews in a single day. Today, DES is experiencing a pageview average of around 500,000 pageviews per day or roughly ten times their pre-covid traffic.

Over-burdened IDES contact center agents strained to answer phone calls and respond to web inquires, resulting in frustrated users and lengthy hold times and busy responses on phonelines. Field offices closed for in person inquiries, which magnified citizen frustration and escalated the need for an easier way to get information to the people who needed it. Using existing systems and resources, IDES was only able to fulfill 2.5% of the daily requests for information, which created a seemingly unmanageable backlog of requests.

Adding to this burden was the need to develop new unemployment benefit programs which stretched the capabilities of development staff. The combination of these issues precipitated an immediate need for additional technology to meet immediate demand and grow with post pandemic requirements.



## IDEA

The Illinois Department of Employment Security, in coordination with the Illinois Department of Innovation and technology, Presidio and Google created a Contact Center Artificial Intelligence (CCAI) agent or “chat bot” to assist with delivering information and answering inquiries from the website and call center. The CCAI agent takes both voice and typed questions and utilizes artificial intelligence to respond with an appropriate answer. The help from the “chatbot” allows the agency to improve their response levels and helps reduce the frustration of residents who can now obtain information more quickly.

The chatbot agent allows an omnichannel delivery surface able to communicate on web and telephony and offers ability to expand into TEXT, social media and other platforms in the future. The platform can also accommodate multiple languages and a wider array of services such as password resets, status inquiry and more targeted information regarding individual benefits. These additional features are being considered for future development phases.

## IMPLEMENTATION

The implementation of the chatbot solution for unemployment inquiries was a three phased approach:

In the **first phase**, the goal was to keep it simple and find a rapid response for quick help for constituents. Virtual agents were created to give answers to IDES FAQs that were spread across multiple pages on the website. This phase was delivered in 14 days. Over 3 million web inquiries were handled in the first two weeks.

The **second phase** made the chatbots “smarter” and omnichannel. We added Pandemic Unemployment Assistance (PUA) FAQs and deployed virtual agents on the phone system after hours where none had previously existed.

**Phase three** made them even smarter. The goal is to have the virtual agents trained on more “intents” to be able to answer more questions, answer the call on the first ring and triage as efficiently as possible. These steps will allow staff to address more high-priority and complex issues. Eventually, we hope to implement Virtual Agent Data Analytics & Performance Visualizations and address inquiries in multi-Languages. The overall approach supported IDES Call Center staff and gave the people most in need help when they couldn’t reach someone live on the phone.

The chatbot on the website delivers information to residents regarding the process to apply and receive benefits and can also answer common questions via the telephone. The solution was quickly initiated, stood up and continues to grow in its knowledge and functionality. With a short two-week initial time to deploy, the virtual agent started to show immediate results.

## IMPACT

The initial deployment was to relieve traffic on the website. This allowed visitors to more quickly and accurately find information they were looking for and reduced the amount of frustrated phone calls. Since adding this functionality, the website chatbot has had over 6.5 million conversations with users, at an average of 300 conversations per minute. The value of these conversations is in the quality and more than a 90% accuracy rating in identifying the correct request and surfacing a proper answer. Customers routinely leave positive comments regarding their interaction with the AI, often times not realizing it's not a live agent behind the chat window.

With live agents only able to successfully answer 1% of the total call volume the, CCAI is able to assist those users with standard questions and directions common across callers. The chatbot implementation equated to hiring an additional 4,000 human agents for one year. The net result of the telephony integration was multi-fold: 1) a reduction in the frustration of residents, 2) a reduction in stress on the call center agents who were allowed to focus on more detailed issues for claimants, and 3) a savings of an estimated \$140 million compared with hiring contractual resources to address a temporary staffing shortage.

### Chatbot by the numbers:

<b>2 Weeks</b> Contact Center AI web and phone virtual agents deployed in just <b>two weeks</b> .	<b>24x7</b> IDES is helping customers omni-channel. Live Agents supported by web and voice virtual agents <b>24x7</b> .	<b>\$100M</b> The state of Illinois anticipates an estimated annual <b>savings of \$100M</b> based on initial analysis of IDES virtual agent data.	<b>140,000+</b> Virtual agents handle more than <b>140,000</b> phone and web inquires in a day.	<b>Faster</b> Illinois residents are getting help to file their unemployment claims faster.
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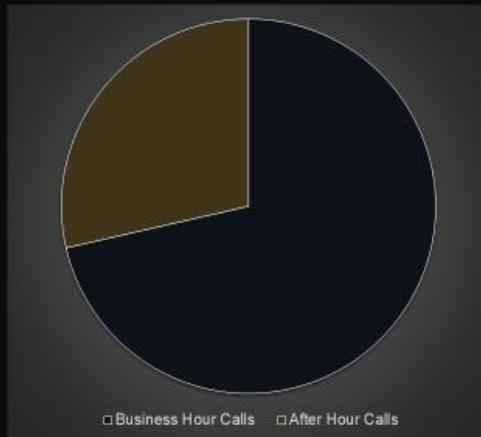
# IDES Website

The IDES website saw an increase of nearly 1,400% in weekly traffic

Weekly site traffic went from 96,193 hits a week to a high of 1.5M a week during the first month



# DES Chat Bot



From May-December, the DES chatbot saw over 8.6M interactions and the voice agent over 7.3M

Illinois jumped right into modern day service delivery with the help of trusted partners and a compelling need. There is no turning back and we look forward to expanding on the technology and becoming increasingly responsive to the needs of the unemployed in our state.