Chatbots Take Constituent Engagement to New Levels

govloop   **GENESYS™**

Introduction

Digital transformation and better constituent experience (CX) are two objectives agencies have been working toward for some time. The COVID-19 pandemic hit the fast-forward button on those efforts, however, highlighting how much the public relies on the government for factual, readily accessible information – and how far agencies need to go technologically to make sure they can provide it.

Chatbots emerged as a quick and effective fix as public demand for information soared, flooding websites and crashing outdated networks. Comparatively easy and inexpensive to implement, chatbots came to the rescue of overburdened contact center workers who struggled to keep up with the volume of questions about coronavirus symptoms, testing site locations and unemployment services. The experience of the past year has put the spotlight on the importance of making constituent and employee services part of larger conversations around IT modernization and digital transformation.

GovLoop and Genesys, a provider of CX and call center technology, created this playbook to look at the role chatbots play in the public sector. You'll find details on:

▷ How chatbots helped agencies through a challenging year

▷ Fun facts about and success stories of chatbots

▷ Common types of chatbots

▷ Best practices for implementing chatbots using the walk-run-fly approach

▷ A case study on unemployment claim modernization

▷ An interview with John Klein, Manager, IT Strategic Planning for King County, Washington

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In the News

Agencies Shift Online

Seeking to slow the spread of the coronavirus, the Office of Management and Budget released a memo directing agency leaders to keep the federal government operational while ensuring mission-critical activities continue. To achieve this, the memo states, "the government must immediately adjust operations and services to minimize face-to-face interactions."

The Takeaway: As a result of the lockdown, use of internet services increased by 40% to 100% compared with pre-pandemic levels, research from May 2020 found.

A Paradigm Shift?

As agencies responded to the coronavirus, it became clear that past procurement decisions were enabling or impeding current responses. At some agencies, bureaucratic inertia and reluctance to embrace new technologies slowed modernization initiatives and made them less resilient. Many technical challenges stem from cultural reluctance to change, but the pandemic showed the negative consequences of slow technological advancement.

The Takeaway: Agencies have been undergoing a "permanent paradigm shift" in the way they view technology adoption, said Kevin Burnett, Pioneer in Residence at the Navy's NavalX, during a GovLoop online training. To promote a growth mindset at NavalX, Burnett puts a "ruthless focus on empowerment" of both the Navy's workforce and government partners.
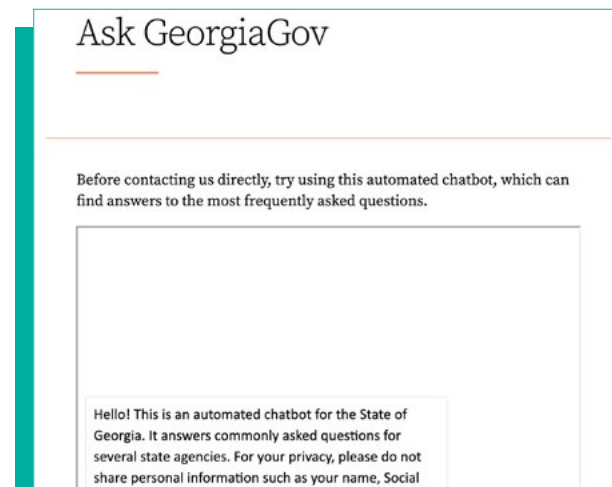
Overwhelmed Websites Hinder Relief Efforts

With online engagement at record numbers, many government websites became overwhelmed, especially after the Coronavirus Aid, Relief, and Economic Security (CARES) Act became law March 27, 2020. Many agencies struggled to get payments out as they battled aging technology that couldn't handle the volume of requests. For instance, as the Washington Post noted, the Internal Revenue Service's MasterFile software for processing tax filings was developed in 1962 and uses the long-outdated COBOL programming language.

States and cities foundered under the weight, too: Georgia's public health website typically got about 5,000 sessions each day, but after COVID-19 hit, that jumped to 5 million.

The Takeaway: Although many agency leaders consider digital services a priority, IT modernization is at different levels of maturity governmentwide. Then-federal Chief Information Officer Suzette Kent said in May 2020 that commercial cloud partners could speed pandemic response. "Scalable, cloud-based, easily configurable commercial solutions in so many cases help us move quickly," she said during a webinar.

Ask GeorgiaGov

Before contacting us directly, try using this automated chatbot, which can find answers to the most frequently asked questions.

Hello! This is an automated chatbot for the State of Georgia. It answers commonly asked questions for several state agencies. For your privacy, please do not share personal information such as your name, Social

May 2020

VA Releases Coronavirus Chatbot

With the number of telehealth appointments using VA Video Connect growing from about 10,000 to 120,000 per week between February and May – a 1,000% increase that the Veterans Affairs Department attributed to people taking precautions against the pandemic – officials sought a way to alleviate call center pressures. It launched a chatbot to answer around-the-clock questions about COVID-19 systems, testing, telehealth and stimulus payments. Developers built the chatbot in three weeks as a way to alleviate the congestion that contact center representatives were dealing with as the public sought information about the deadly virus. If the chatbot can't answer a question, it refers users to other sources such as My HealtheVet for sending a secure message or the phone number of a local VA medical center.

The Takeaway: Agencies experienced a crippling amount of inquiries, forcing them to get creative about providing the much-needed information in other ways. Similar to the VA, the CDC in March built the Coronavirus Self-Checker, which it named Clara, to give the public a self-service way to get facts.

March 11, 2021

A Boost for Technology Modernization

President Joe Biden signed into law the American Rescue Plan, a $1.9 trillion COVID-19 relief package that includes an infusion of $1 billion for the Technology Modernization Fund, plus $650 million for cybersecurity and $350 million for other IT modernization work. That's a huge boost from the $100 million max the fund has received in the past. The fund, which OMB manages, was established by the 2017 Modernizing Government Technology Act. Agencies can tap it for loans to make IT improvements, including AI and chatbots.

The Takeaway: The pandemic accelerated government agencies' adoption of more modern technology, but more work is still needed to prepare them to better handle emergent events in the future. Employees are on board with modernization. The number of respondents to Gartner's "Accelerate Digital for Future-Ready Government" survey who said that their digital initiatives are maturing grew to 48% from 15% between 2017 and 2020. In 2020, only 15% said they weren't making progress, compared with 33% in 2017.

Need to Know

Chatbot Fun Facts

What is a chatbot?

Chatbots are pieces of software that use AI to act as an interface between a person and a computer. Chatbots get their name from mimicking chatting with a real person.

Source: Genesys

British scientist Alan Turing laid the foundational ideas for chatbots in his 1950 paper "Computing Machinery and Intelligence" in which he proposed an "Imitation Game" for determining if machines can be intelligent. **Today, that is known as the Turing Test.**
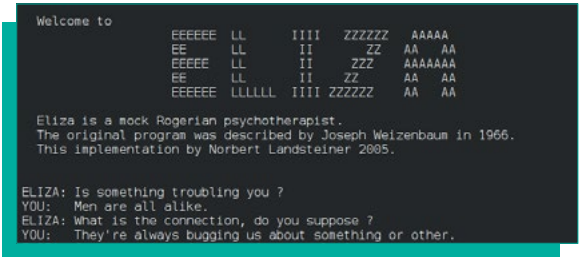
The first chatbot was created in 1966 at the Massachusetts Institute of Technology. Known as ELIZA, it recognized keywords or phrases from input to produce pre-programmed responses.
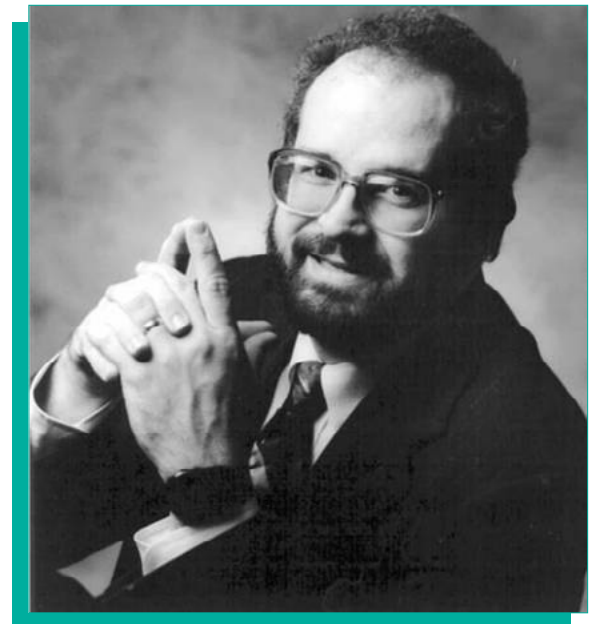
Michael Mauldin, creator of the Lycos web search engine, **coined the term "ChatterBot" in 1994**.

Need to Know

By the Numbers

61.1
the federal government's score out of a possible 100 on Forrester's 2020 U.S. Federal Customer Experience Index.

>60%
of governments will have tripled citizen digital services by 2023, but less than 25% will be integrated across organizations' silos.

70%
of customer interactions will involve emerging technology such as chatbots by 2022, up from 15% today.

50%
of local governments have initiatives to move more services online as a result of COVID-19 to support their business community and residents.

30%
of customer experiences will be handled by conversational agents in 2022.

30% to 45%
the amount of contact center staff attrition – more than double the national average of 15%.

89%
of respondents to a Forrester survey on chatbots said they are useful or very useful.

$20 billion
the amount the federal government spends each year on contact centers.

76%
of respondents to the National Association of State Chief Information Officers' 2020 State CIO Survey said chatbots were the main automation solution and emerging technology they put in place to respond to COVID-19.

Types of Chatbots

Chatbots meet different needs in different ways. To understand what type of chatbot might best suit your agency, review "An Overview of Chatbot Technology," published last year by researchers at several international universities. It states that chatbots can be classified using several parameters: the knowledge domain, service provided, goals, build method, input processing and response generation method and the human-aided.

Types Defined:

○ *Open domain:* chatbots that can cover general topics

● *Closed domain:* chatbots that focus on a particular area

🤝 *Interpersonal:* chatbots that provide services by passing information on to the user

⊞ *Intrapersonal chatbots:* chat apps like Messenger, Slack and WhatsApp

ⓘ *Informative:* chatbots that provide users with information that is stored or available from a fixed source

▢ *Conversational:* chatbots that communicate like a human being

👤 *Human-aided:* chatbots that use human computation in at least one element

Success Stories

- Rhode Island deployed a service that residents can use to understand their symptoms. The first step is communicating with a chatbot that can help the user get virtual assistance from a human or schedule an appointment to get tested for COVID-19.

- Connecticut set up a virtual assistant to help residents navigate the pandemic. Users can either ask a question or select from a drop-down menu of topics, including vaccine eligibility and scheduling, testing and guidance on permissible gathering sizes.

- Los Angeles' City Hall Internet Personality (CHIP) chatbot has been helping reduce email volume since 2017. Situated on the Los Angeles Business Assistance Virtual Network, the multilingual bot can answer questions that users either type or speak into a text box.

- Missi is Mississippi's first artificial conversational chatbot. Designed and launched in 2017 to help users access the correct online service or make an online payment, the state tweaked Missi last year to include information on COVID-19 testing and state guidance.

- Cabarrus County, North Carolina has a chatbot that can help people use digital services – something that has been in high demand during the pandemic. The chatbot also offers a link to COVID-19 resources and vaccine information for speedy access.
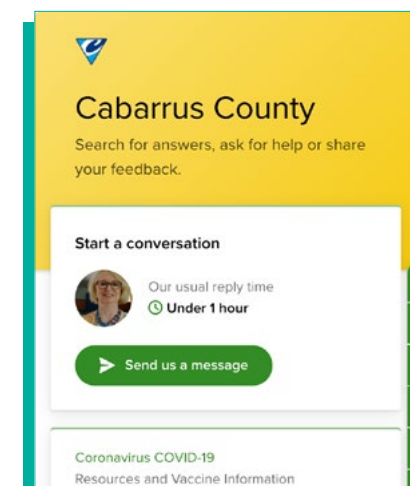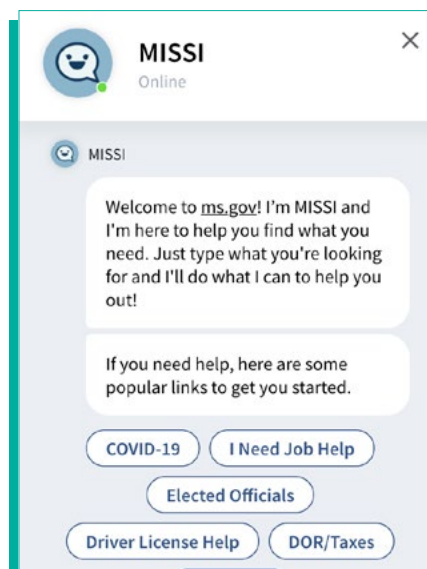
The Playbook:
How to Get Chatbots Up and Running

In today's digital age, people are not only comfortable with online self-service options such as chatbots, they expect them. Gartner estimates that by 2022, 85% of customer service interactions will start with self-service, compared with 48% in 2019. This extends to government engagements, too, where they can be a boon to overburdened contact center agents and serve as a bridge between digital transformation and CX. **Here are four steps to fielding chatbots.** $\longrightarrow$
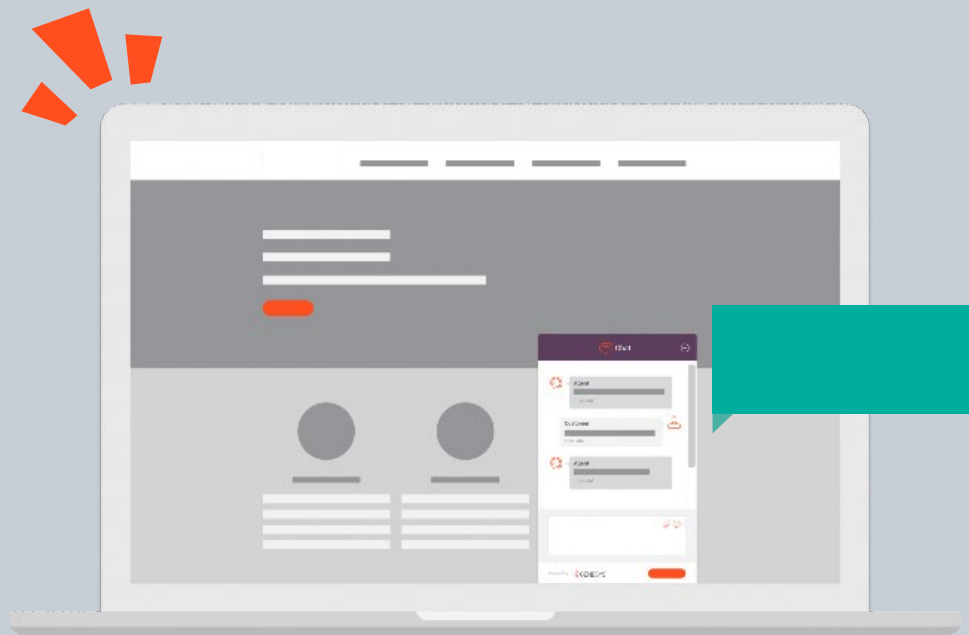
Understand Chatbots' Benefits

Agency contact centers have a finite amount of resources, including the number of people trained to handle and respond to questions. They can handle only so many requests at a time, which can leave employees and constituents alike feeling frustrated.

But chatbots allow for an unlimited number of interactions simultaneously, said Tony Pearson, Solution Consultant Leader for Public Sector at Genesys. Specifically, they can handle frequently asked questions, point users to needed websites or forms and assist with online transactions. With such self-service options, call volumes decrease and human agents have more time to focus on more complicated requests.

What's more, chatbots are relatively easy to implement. "We can show you in an hour how to stand it up and soon after put it in production," Pearson said. "I don't see setup as a massive overhauling task, as long as you have the right technology in place."

What to do: Identify contact center bottlenecks and bring in stakeholders to set a strategy for alleviating them with chatbots.

Lay a Technological Foundation

Pearson defines the "right technology" as forward-facing solutions, such as Genesys Cloud. Legacy technology, such as private branch exchange systems, which support voice environments, not digital ones, don't work for a multimedia, omnichannel experience.

But don't get rid of voice, either. Instead, apply the bot to interactive voice services, too.

"Some people may be very technology-averse and some people may be super technology-savvy," Pearson said. "You want to make sure that you're also working with a technology that is able to transition those channels."

When you have a single pane of glass for how people consume your agency's services, they will get the same answer no matter where they go. "That bot is really going to allow for that consistent experience because now you're not getting five different human agents that are answering about the status of a complaint," he said. "You have one bot that goes into the same system and tells the same exact information every time, no matter what channel you go in."

What to do: Determine the multiple channels the public uses to engage with your agency.
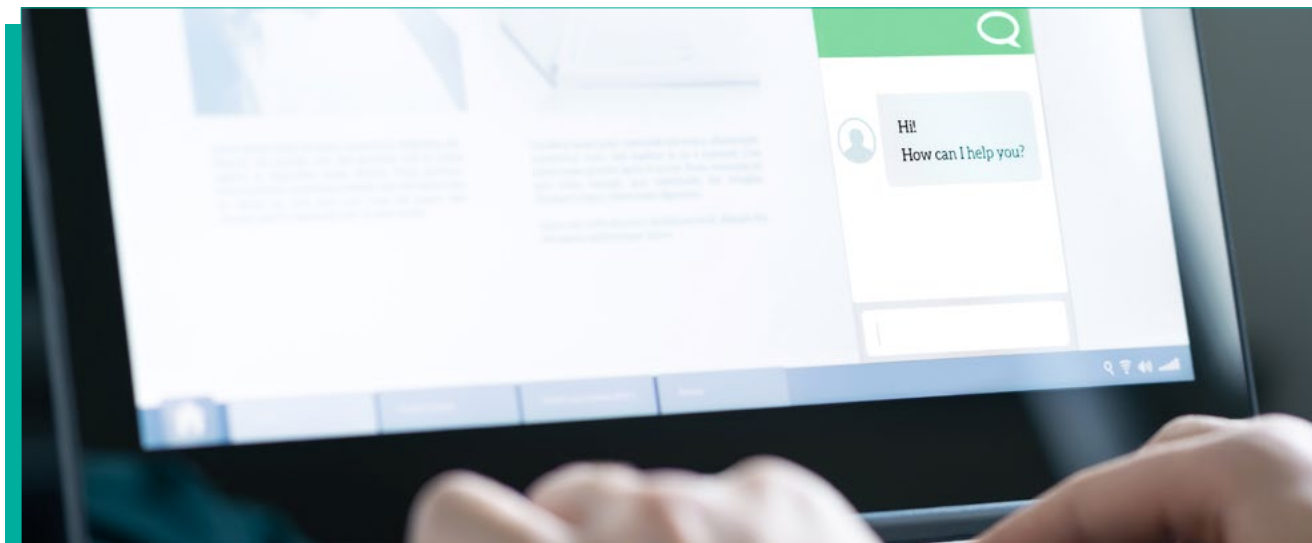
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Foster a Growth Mindset

Getting support for chatbots is more of a cultural issue than a technological one. Because workers often associate AI-driven technology with job replacement, it's important to make sure your call center's human agents see chatbots as a job enhancer.

"That easy stuff gets handled by the bot," Pearson said. "The agents are now going to be, more likely than not, handling more complex problems on a regular basis versus handling simple things. Now you're really challenging people in the contact center."

What to do: Make sure human agents know the bots will enhance, not replace, their work.

4

Plan Ahead

Because chatbots are AI-driven, they never have to become static. As more information becomes available, agencies can train the bots to provide it proactively – before they even become the subjects of frequently asked questions. With predictive analytics, agencies can anticipate what constituents might start looking for, driving internal and external CX that much further.

"When you're iterating the bot, a little bit of that is from the human process and understanding from an analytics standpoint how we can make improvements," Pearson said.

"But also, technology and machine learning get better over time, so as a given agency is collecting data on their own contact centers, bot vendors, including us, are getting better – we're learning lessons over time, and we're able to tune our machine learning to be able to handle more and more and more," he said.

What to do: Treat your first venture into chatbots as a starting point, not a finished product.

"...Technology and machine learning get better over time... we're learning lessons over time, and we're able to tune our machine learning to be able to handle more and more and more..."

Tony Pearson
Solution Consultant Leader for Public Sector, Genesys

A Walk-Run-Fly Approach

Although many agencies skipped right to "run" in implementing chatbots and other digital technologies in response to the pandemic, the best approach is the walk-run-fly methodology.

Walk Phase

The first two steps are part of the walk phase, plus using analytics to determine exactly what those frequently asked questions are. A simple way to do that is to poll human contact center agents about what takes the most time and what requests pop up most often, Pearson said.

"You'll get imperfect data, but you'll get data that you can work with and will get improvements on," he said.

Best practices for walk: Figure out how to get visibility into your data to determine whether it tells a story or just a volume.

Run and Fly Phases

Pearson combined these two because he said the differences between them are slight. Each puts a finer point on the problems identified in the walk phase – for instance, moving from frequently asked questions to more medium and then complex problems. Those are things that if you ask five human agents, you'll get five different answers. That opens the opportunity to advance the chatbot.

"With good analytics, you can say, 'I have a 100-seat contact center and I don't need to poll them all because I can see that problem B is being handled by a bot and humans are dealing with problem A and maybe that can be automated.' A lot of times, the answer is yes, and that's how you iterate and that's how you move forward," Pearson said.

Best practices for run and fly: Have good analytics and people who can focus on them consistently, not once a quarter, Pearson said. For instance, unemployment contact centers and websites get more use at the beginning of the month, when checks go out, so studying numbers on the 20th day of the month will result in an inaccurate representation. Instead, check throughout the month, he suggested.

Stemming the Flow: How One State Agency Modernized to Handle Unemployment Claims

State unemployment agencies scrambled to serve the floods of customers who filed claims during 2020. "More than twice as many jobs were lost between March and April 2020 as were lost during the entire 2007-09 period," according to the [Bureau of Labor Statistics](#). "It is not yet clear how quickly employment will fully recover."

At one state agency, unemployment grew 13% in a single month. Here's how it handled the influx.

Challenge

First, let's break down what a 13% growth in unemployment looks like: The agency received 20 months' worth of claims in 30 days, with 1.2 million people filing. During a typical February, this agency would receive about 70,000 claims, but it processed that many in one day in March 2020.

Unsurprisingly, its existing 25-year-old interactive voice response (IVR) system couldn't scale to handle the increased volume. As a result, about 2 million calls per day were abandoned.

The agency had human help – 1,000 agents – but needed more and put state legislature employees on phones, too. It still wasn't enough.

Solution

The agency turned to the private sector for more assistance, but providers were quoting for services the agency couldn't budget for while in crisis. It contracted to use Genesys' Rapid Response program and quickly stood up the Genesys Cloud IVR for voice calls. Additionally, the agency is using Google Dialogflow for voice and text virtual agent and web chat, and implemented knowledge base connectors. Knowledge connectors parse documents such as frequently asked questions or articles to find automated responses.

Benefits

Since putting Genesys Cloud IVR in place, which took about two weeks, the agency has achieved significant improvements. For instance, it has seen a 350% increase in connected calls, the center can now support both English and Spanish with text to speech, and the average time spent in IVR is 40 seconds.

Chatbots in Practice

King County Puts Chatbots to Work

An interview with King County, Washington's John Klein, Manager of IT Strategic Planning

King County, Washington, has been testing chatbots for a couple of years and released a general-purpose chatbot about 18 months ago that the county swapped out for a pandemic-specific bot last year. We spoke with John Klein, Manager of IT Strategic Planning, about what the technology has done and can do for the county.

This interview has been lightly edited for length and clarity.

A Multichannel Approach

GovLoop: What's your chatbot strategy?

Klein: When you think of chatbot, most people think on the web there's a chat feature off a webpage, but we've really been trying to think about accessibility and multichannel access, so a lot of our testing and proofs of concept have been around multiple channels. Instead of just having a webchat, we also have a voice chat and we have a text chat. That's an important thing from our standpoint because we look at text as being accessible by underserved communities and those who aren't necessarily good at getting on the internet. We've also done a little experimenting with social chat – Facebook Messenger as a chat tool.

What benefits have you seen?

We drop less calls if we can direct somebody to a chatbot, we have people on hold for a shorter period of time and the biggest one that we're shooting for is hopefully we can answer the question in a self-service way so they don't really need to interact with the call center and they have a successful and positive experience without needing an attendant to answer. We haven't seen a reduction in staffing. What we've seen is an increase in interactions because we're more accessible now.

The contact center employees can focus on the more difficult or more complex or not as frequently asked questions. One of the really cool things about these chatbots is they give us a lot of data and information that we didn't really have in the same way before, so we're much more able to know what kinds of calls we're getting and what people want to know.

A Chatbot for COVID-19 Response

You started a COVID-related chatbot about a year ago, but had a general-purpose chatbot before that. Did you use it as a foundation for the COVID one?

We built it from scratch. We had a vendor help us with the initial components, and we integrated it with an existing platform that we have that provides knowledge management. But with the multichannel, what you find is you can't really have the same answers across all those channels, but you want to have a consistent answer. So we have also put those into the same knowledge base, and we had to expand our knowledge base a little bit to know the difference between which channel is making a request. An example of that is with a text chat, you have only 120 characters otherwise it starts splitting it into multiple messages, so we try to keep all our responses to less than 120 characters.

Digital Transformation and the Future

How do chatbots fit into the county's overall digital transformation and CX strategies?

We want to increase connections that we have with communities, we want to increase the connections we have with other governments and we want to increase the use of connecting data into that whole process so that we're giving better answers. All of those are different parts of our strategic plan but they fit really well into a chatbot.

How do they support equity?

COVID has made it even more clear how inequitable society is in different ways, and government and policy all have an impact on this equity. Part of the reason we have this multichannel strategy is we don't want to rely just on the internet as the only way for people to access our services. Our multichannel strategy is really focused on trying to reduce and eliminate digital inequity.

How will chatbots evolve?

We're already using some pretty advanced technologies like natural language processing and AI within the current chatbots, and I think that will only increase going forward. I think the fact that we've got to curate a knowledge base to provide information will probably evolve over time so that chatbots can go

and look at much broader and bigger data structures to find answers. It's going to start making recommendations. A chatbot that's been asked three or four questions might realize that maybe this is really what the person is getting at and directly answering the question maybe isn't going to help them as much as offering an option.

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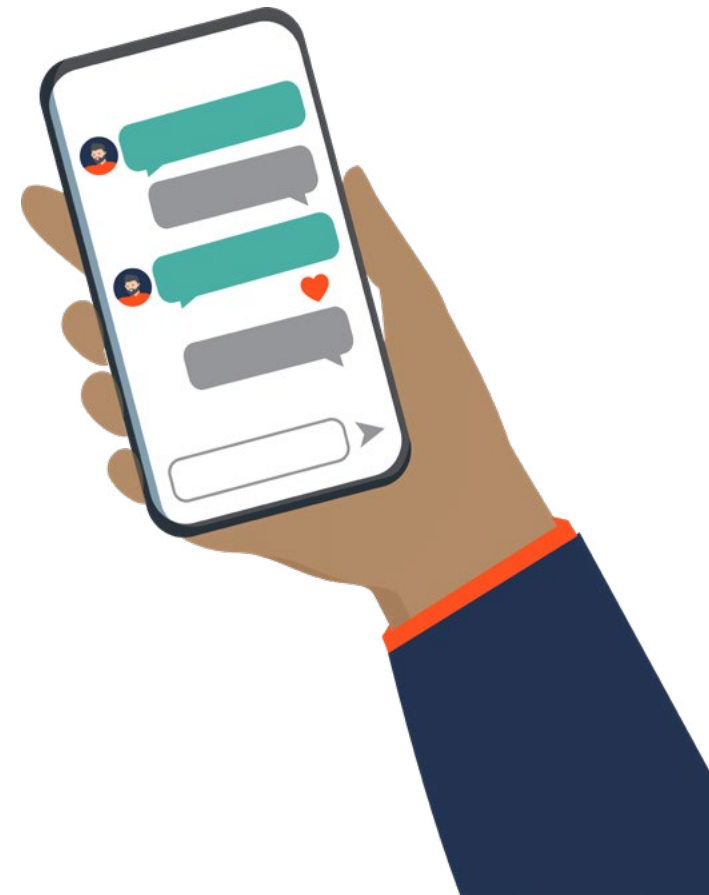
Give your constituents

SUPER HUMAN
SERVICE

Customer experience software
to deliver on the promise
of digital government

Industry Spotlight
How to Bring Empathy to CX

The use of chatbots has a positive cyclical effect: The more burden they take off contact center employees, the better equipped those employees are to provide a solid CX. Similarly, when customers need to escalate their requests from a self-service application to a human agent, chatbots can fill the agent in so that users don't have to explain their needs all over again. That seamlessness of a human-centered experience feeds the customer journey by promoting empathy, or the ability to understand a customer's unique experience and situation.

Not historically a major focus of government CX, empathy is gaining traction through initiatives such as the Government Contact Center. That's because empathy brings people and government together, makes customers feel heard and understood, and builds trust.

"When you start talking about empathy, you have to start with the agents and then work your way out," Pearson said. Emphasizing his point, Performance.gov has observed that "employee interaction" has the highest correlation to satisfaction and trust for in-person services, but the second to lowest correlation for contact center interactions.

Applying empathy to CX requires a cultural shift to a new, holistic way of thinking. Agencies can ask themselves five questions to get into an empathetic mindset:

- What journeys are my customers on?

- Where are they in that journey?

- What are they trying to accomplish?

- What or who are they interacting with?

- How can technology guide them to the best result?

Genesys can help agencies determine the best omnichannel strategy to enable their business outcomes, establish roles and communication plans, connect systems so they work together and give both customers and human agents a common playing field. A provider of cloud and multicloud services, Genesys is positioned to provide technology that drives empathetic CX to support the digital transformation agencies need to make.

The best way to operationalize and measure empathy is through an approach Genesys calls Empathy in Action, which entails four actions in a perpetual cycle: listen, understand and predict, act and learn.

Empathy in Action is part of the Genesys vision: Experience as a Service. This involves bringing together multiple customer engagement channels, data and innovative technologies, including chatbots, to deliver personalized experiences.

Genesys explains the vision is held up by four pillars:

- **Getting connected:** An omnichannel foundation is the start of creating that seamless view of customer journeys.

- **Process orchestration:** Connect technology to orchestrate complex, personalized customer engagement across service options.

- **Resource management:** Employee engagement improves productivity and morale. Agents who have full access to customer data can resolve more problems faster.

- **Knowledge and insights:** Collect and manage insights from all customer touchpoints to understand your next action and make better decisions.

Paired with Genesys's Contact Center as a Service – one of the fastest-growing Software-as-a-Service platforms in the industry – this approach powers the meaningful CX and digital transformation agencies need.

"When you start talking about empathy, you have to start with the agents and then work your way out."

Tony Pearson
Solution Consultant Leader for Public Sector, Genesys

Final Takeaways

1. Chatbots working in concert with human agents is a recipe for CX success.

"When you start talking about those easier things being handled by bots, people say, 'They will need less agents,'" Pearson said. "But when you look at the unprecedented times that we're in right now, a lot of agencies could double and triple their staff and still not have enough people to handle all the inquiries coming in the door."

Let the automation and AI handle frequently asked questions and provide customers with self-service options. That meets two needs: customer expectations of getting answers via digital engagements, and contact center employees' preference to work on complicated requests that require more brainpower.

What's more, humans and machines can work together to get the best outcomes for everyone. Agents who take over when a chatbot can't fulfill a request can use the data it collected to pick up where the bot left off, making the CX journey seamless.

2. Implementing chatbots is a multistep effort.

Agency contact centers can handle only so many questions, as the influx of outreach during the pandemic showed. With the right technology – future-ready ones such as cloud that support an omnichannel experience – agencies can collect data on what questions people ask most, where contact center employees' pain points are and where automation can alleviate the workload.

Most importantly, agencies shouldn't rush to provide all information through self-service out of the gate. Instead, they need to use a walk-run-fly approach that builds on chatbots' abilities and gives all stakeholders a say in the process.

"In the past, the contact center was an IT-driven function," Pearson said. "Over time, we've noticed that this has shifted a little bit because we're really trying to resolve what we would refer to as business-related problems, and if you're trying to solve business-related problems with just IT staff, it's just not going to work."

3. Empathy in CX is a must.

"Agencies, when they're constantly in backpedal mode, their agents are, quite frankly, not happy because they're bored and frustrated with the inquiries they get all the time," Pearson said. "There's a lot of monotony. That has a downstream effect on their psyche overall."

At the intersection of CX and digital transformation, agencies can find the type of engagement that best serves customers and employees alike.