Tech Executive Leadership Initiative

POLICY

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Enhancing Small Business and Constituent Experience Via Public Sector Chatbots

EXECUTIVE SUMMARY

The City of Foggyton should implement a chatbot solution that will allow small businesses to more easily apply for COVID-19 relief opportunities. This chatbot should be implemented on mobile, Facebook, and web applications on city agency websites. Such a solution would allow businesses to more easily locate business relief and permit application forms, and would help them answer questions they may have. This chatbot program would also allow relief opportunities to be accessed more equitably by people of color, women, and immigrant business owners who typically access such opportunities less frequently. By implementing an interactive, customer-focused chatbot, the City of Foggyton can improve the experience small businesses have when accessing information and completing forms.

BACKGROUND

Small businesses in the City of Foggyton have suffered tremendously due to the COVID-19 crisis. Some estimate that almost a quarter of all small businesses in the United States closed down during the pandemic. In response, many city governments have tried to respond by easing permitting requirements (for example, to allow outdoor seating) and by providing a variety of economic relief opportunities, such as grants and other financial aid opportunities.

While the City of Foggyton has provided myriad relief opportunities, many business owners have complained that the forms and application processes are difficult to navigate. These friction points have made the experience of obtaining government benefits and complying with government regulations difficult, and have fostered dissatisfaction within Foggyton's city agencies. In interviews, many small business owners admitted that they did not apply for aid either because

they were unaware of opportunities, or because the bureaucratic hurdles were too challenging for them to navigate. These challenges are particularly problematic for small businesses, which already spend a disproportionate amount of time on administrative tasks.

RECOMMENDATION

We recommend that the City of Foggyton's Digital Services team incorporate chatbots into existing relief application websites to improve the user experience and service delivery. A chatbot tailored to addressing the needs of small businesses would reduce the administrative burden of applying for COVID-19 relief and improve the small business community's access to city services. Chatbots can be used on desktop or mobile devices, can be integrated with existing social networking platforms and voice assistants. They have a variety of benefits, including the ability to streamline navigation, personalize each user's experience, and respond in multiple languages. A chatbot would improve the accessibility and delivery of COVID-19 relief opportunities and improve small businesses' experience in accessing government services.

Our recommendations stem from extensive research, including tracing the process flows on existing city agency websites, speaking with city officials, small business owners, and technologists, and testing several available technology solutions for improving interactivity and navigation on city websites. We also reviewed available information about the deployment of chatbots in various public-sector settings globally. We focused in particular on addressing the challenges small businesses and historically underserved populations face when accessing government services. We believe a chatbot service will solve Foggyton's small business application problem because:

1. *Chatbots offer a more tailored user experience that can ease common frictions in accessing government services online, expand access, and improve customer satisfaction.*

2. *Government compliance and service-delivery tasks are well-suited to customer experience improvement through automation and interactive design.*

3. *Chatbot functionality can be phased and optimized over time, allowing*

for cost-effective, staged roll-outs and continuous improvement of the user experience.

Below, we expand on these points and explain the use of chatbot technologies in government more broadly. We invite the City of Foggyton to view our demonstration of four different types of chatbot models they could utilize: a mobile chatbot, web chatbot, Facebook-integrated chatbot, and AI-based chatbot.

DISCUSSION

1. *Chatbots offer a more tailored user experience that can ease common frictions in accessing government services online, expand access, and improve customer satisfaction.*

Chatbots can ease many of the frustrations that users report experiencing when accessing information and services through government websites. Such complaints include that: sites are hard to navigate; businesses cannot get answers to simple questions; finding services takes too long; search options are not useful; services are not accessible on all mobile devices; online forms are of poor quality; services are not available outside of normal business hours; and sites do not integrate with social media sites. Relevant information is also often spread across multiple government agencies, forcing businesses to navigate through a series of differently constructed websites to obtain services.

Small businesses increasingly expect streamlined and integrated digital experiences; the inability to provide such an experience can foster dissatisfaction and a lack of trust among constituents. Poorly designed online interfaces limit access to government services for those who need them most, such as small businesses, the elderly, and historically underserved populations.

Chatbots provide instantaneous and always accessible customer assistance. Even a simple menu-driven chatbot can enable users to more easily navigate their way to the information they need. Chatbots are programmed to simulate human interactions and can personalize each user's experience based on their specific interests, needs, and circumstances. Chatbots also can assist with the completion and submission of forms by guiding users through the application process. Chatbots can in some cases operate through text messaging, improving acces-

sibility for users of mobile phones. More sophisticated deployments can provide increasingly personalized experiences, using pattern recognition based on past interactions and end-user data to recommend services and assist in populating new forms. Chatbots are already used by many European countries and US states and cities to streamline government processes and improve customer experience.

The use of chatbots has recently gained momentum in the public sector as governments automated the delivery of services in response to the COVID-19 crisis.[1] The COVID-19 crisis has led a variety of government agencies to pivot to using messaging app chatbots to convey public information to sufficiently broad constituencies. These early use cases lay the foundation for broader uses of chatbots in the delivery of government services.

Chatbots can significantly improve the accessibility of government interfaces for a diverse user population, as they can respond to requests in multiple languages. For example, the city of Los Angeles's chatbot geared toward the local business community currently supports over 60 languages.[2] Widely-used messaging applications, such as WhatsApp and Facebook, can be integrated with chatbots, and chatbots can be easily optimized for mobile devices, making public-sector information and services more readily accessible. Chatbots can also be integrated with voice assistants such as Alexa and Google Assistant.

2. *Government compliance and service-delivery tasks are well-suited to customer experience improvement through automation and interactive design.*

Many of the City of Foggyton's interactions with businesses and individual constituents are likely to benefit from the automation a chatbot provides. Whether trying to access disaster relief funds, obtain business permits, pay taxes, or file for other publicly available benefits, users must complete a set of systematic steps and necessary forms. The document-based, rule-driven nature of many government tasks can be readily automated, leading to an improved customer experience. Chatbots can be programmed to help users navigate common processes, address frequently asked questions, or assist with transactions. Chatbots also can systematically guide unlimited numbers of users through these queries, processes, and transactions. Digitizing common processes and information flows can also reduce the burden on staff members by reducing the number of questions government

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officials receive.

Chatbots are meant to be a supplement to direct human interaction, not a replacement, but automating commonly used process flows frees up government employees to address tasks that are more complex and that require more customized interaction. Such automation can improve the constituent experience while also boosting employees' job satisfaction and morale.

Furthermore, chatbots' ability to collect and store data can help inform government decision-making and enable officials to identify and respond to common questions or challenges faced by their constituents. Foggyton city officials can receive dynamic data about what questions are being asked and whether services and answers are successfully obtained.

3. *Chatbot functionality can be phased and optimized overtime, allowing for staged roll-outs and continuous improvement of the constituent experience.*

Chatbots can be implemented across a multi-stage process, which can help ease budgetary challenges and enable ongoing improvement based on user feedback. In Los Angeles, for example, a small team of developers reportedly created Chip, the beta version of the city's chatbot, in only a few days. Programmers can regularly update the virtual assistant's content and functionality as needs and expectations change. Chatbots can be deployed to help with a single process, such as permitting, or to serve as a more broadly useful digital gateway for constituents. Having a chatbot in place can also make it significantly easier to quickly implement services tailored to emergency situations, such as COVID-19 relief.[3]

Chatbots can be programmed initially in a menu-driven manner based on existing rules and processes. Even a simple information retrieval-based chatbot model can provide more accessibility, ease of navigation, and information retrieval. Future iterations can include more customizable responses and leverage machine learning technology and natural language processing to improve conversational experiences. Going forward, chatbots can be enhanced with greater functionality, such as a single form for capturing information, to further enhance the customer experience.

ABOUT TELI

This project was completed as part of the Tech Executive Leadership Initiative (TELI), a 10-week skills-building initiative that prepares experienced technology leaders to engage effectively with public sector challenges. Learn more at aspentechpolicyhub.com/teli

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Endnotes

1 Ben Miller. "Government Chatbots Now a Necessity for States, Cities, Counties," *Government Technology*, December 22, 2020, https://www.govtech.com/products/Government-Chatbots-Now-a-Necessity-for-States-Cities-Counties.html; "Architecture for Public Service Chatbots," European Commission Directorate-General for Informatics, April 10, 2019, https://joinup.ec.europa.eu/sites/default/files/news/2019-09/ISA2_Architecture%20for%20public%20service%20chatbots.pdf; Matthias Daub et al, "Automation in Government: Harnessing Technology to Transform Customer Experience," McKinsey Global Institute, September 2020, https://www.mckinsey.com/~/media/McKinsey/Industries/Public%20and%20Social%20Sector/Our%20Insights/Automation%20in%20government%20Harnessing%20technology%20to%20transform%20customer%20experience/Automation-in-government-vF.pdf.

2 To chat with LA's virtual assistant Chip, click on https://www.labavn.org/#, and then click on "Chat with Chip" in the navigation bar. For more information on Chip see also: Theo Douglas, "Los Angeles, Microsoft Unveil Chip: New Chatbot Project Centered on Streamlining," *Government Technology*, May 3, 2017, https://www.govtech.com/computing/Los-Angeles-Microsoft-Unveil-Chip-New-Chatbot-Project-Centered-on-Streamlining.html.

3 "State of South Carolina Places in Top 5 of Government Experience Awards," *Business Wire*, October 5, 2020, https://www.businesswire.com/news/home/20201005005110/en/State-of-South-Carolina-Places-in-Top-5-of-Government-Experience-Awards.