ChatBots: Explore and Build Using Non-Coding Tools

By

Cameron Beveridge

EXECUTIVE SUMMARY

The report includes an analysis of two different chatbot creator platforms, 'Chat Fuel' and 'Flow XO'. A criterion compares the two platforms based on their capabilities. The paper continues to highlight the pros and cons of chatbots and their application in the business world. Based on the analysis, it was found that Chat Fuel had the most user-friendly platform to generate a non-code-based chatbot. A chatbot can be used across different industries ranging from retail, finance and customer service. Chatbots provide quick responses to a simple question to improve customer service efficiency and customer satisfaction.

<u>TABLE OF CONTENTS</u>

INTRODUCTION

Industry 4.0 has paved the way of integrating technology within multiple facets of the business to improve product efficiency, quality and costs (Kiel et al, 2017). Digital innovation is a process whereby using the concepts of industry 4.0 enterprises can create a new tool to improve the business's strategy, implementing new software and platforms. The result of digital innovation has led to greater competition between companies benefitting the customer, cost reductions and revenue growth (Svahn, Mathiassen, and Lindgren, 2017). Other forms of digital development include digital transformation and disruption. Digital disruption is defined as digital changes that impact the value of a product or service, where has digital transformation is the process where digital technologies are applied across areas of a business which were traditionally 'analog' and did not incorporate digital technology initially (Shrivastava, 2017). Digital research and development have become a rapidly growing industry aiming to give businesses an edge over their competitors and provide a better experience for customers (Bolton et al, 2018). Chatbot software was developed to provide a text-to-text conversation or text-to-speech. Chatbots are intended to seamlessly engage in conversation with a customer to simulate the experience of talking to a real operator (Setiaji, and Wibowo, 2016). Two chatbot platforms (Chat Fuel and Flow XO) have developed websites for businesses to generate and implement their chatbot service to improve their businesses. Chatbots are an accessible tool which can be constructed and efficiently within a company.

CHATBOT ANALYSIS

The following table illustrates the criteria met by each chatbot platform.
Table 1

Tool/Criteria	Chatbot 1 (Chat Fuel)	Chatbot 2 (Flow XO)
Meets the definition of a chatbot	Yes	Yes
Provides AI	Yes	Yes
Templates	Yes	Yes
Complex Functionality	Yes	Yes
Primary Function	Yes	Yes
Easy to Learn	Yes	No
Easy for Non-IT User	Yes	No
Technical Support	Yes	No
Informative Introduction	No	Yes

CHATBOT EVALUATION

According to Table 1 Chat Fuel (Chatfuel, 2020) (Appendix A) and Flow XO (Flow XO, 2020) (Appendix B) met the criteria of being a chat. Aforementioned, a chatbot aims to simulate a text-to-text conversation as if it were a real person. Both platforms allowed for tailored responses that appear organic when spoken to. Both platforms also exhibited that they are capable of machine learning. Based on the users' software abilities, the chatbots appeared to have a 'reactive AI' where only simple tasks and critical words were recognised based on the parameters set by the creator (Joshi, N. 2019). Despite the AI being incapable of high complexity tasks, there is a degree of AI. Both platforms provided a template to test initially involving a simple greeting. The greeting can be tailored and expanded further upon to increase the complexity of the chat bot's response to questions. The most complex tools that were available for Flow XO can provide short cuts to specific websites as well as allows for customer payment. Chat fuel had a cross-platform and third-party integration with existing apps enabling to be a versatile chatbot. Based on the processing capabilities Flow XO the chatbot can be used to support customers with any simple issues as well as provide direct links to company information and quick payments. This service would be beneficial for banking apps and retail. Chat Fuel's capabilities of cross-platform usage are limited compared to Flow XO efficiently providing as it lacks the payment option. Chat Fuel can answer questions by gathering data from software from different applications to provide a more accurate answer/response with more depth answering questions more specifically with greater efficiency and safety. The key focus of both chatbots is to reduce the amount of time for customers to spend waiting for help from a human support worker, to create more efficient transactions and greater detail for the information they require. Chat Fuel was found to be the most accessible software to use as the interface was simple with generous technical support. Flow XO was technically challenging with a greater degree of technical difficulty attempting to complete simple tasks. Based on the analysis Chat Fuel is more non-IT friendly compared to Flow XO, whereas Flow XO provides a more remarkable service.

CHATBOT BUSINESS APPLICATION

There are several benefits to using chatbots across various industries. They can also be used in customer support to increase efficiency with helping customers (Ramachandran, 2019). One of the critical benefits of chatbots is its versatility across different sectors. Most businesses have a service line ranging from finance to retail and manufacturing (Waylan and Cole, 1994). Customers will continually have a question about products and services often repeatedly asked (Gupta et al, 2007). Chatbots can reduce human-human interactions and can provide a 24-hour customer service (Chung et al, 2014). When there are no operators, available chatbots can provide a degree of assistance compared to no assistance at all. Chatbots are also able to provide quick and concise answers to short and simple questions. Using keywords and terminology, chatbots can quickly identify possible solutions or further information to frequently asked questions (Tao et al, 2019). Most importantly, customers can save their own time talking to a chatbot compared to waiting online for a real support worker to answer a simple question (Følstad, Nordheim and Bjørkli, 2018). Issues associated with chatbots includes the inability to answer complex problems which the chatbot cannot identify and the lack of friendliness that comes from a chatbot due to missing human component of interaction (Peng and Ma, 2019).

CONCLUDING STATEMENTS

Based on the analysis Chat Fuel provided a user-friendly chatbot compared to that of Flow XO. Skilled IT technicians would benefit from Flow XO. Developing businesses transition to chatbot based technology should use Chat Fuel. The application for chatbots is growing with improving AI capacity. Chatbots can be extremely beneficial to a business and a customer through the increased efficiency to resolve simple issues.

REFERENCES

Bolton, R.N., McColl-Kennedy, J.R., Cheung, L., Gallan, A., Orsingher, C., Witell, L. and Zaki, M., 2018. Customer experience challenges: bringing together digital, physical and social realms. *Journal of Service Management*.

Chatfuel.com. 2020. *ChatFuel*. [online] Available at: <https://dashboard.chatfuel.com/bots?view=list> [Accessed 25 October 2020].

Chung, M., Ko, E., Joung, H. and Kim, S.J., 2018. Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*.

Flowxo.com. 2020. *Flow XO*. [online] Available at: <https://flowxo.com/app/dashboard> [Accessed 25 October 2020].

Følstad, A., Nordheim, C.B. and Bjørkli, C.A., 2018, October. What makes users trust a chatbot for customer service? An exploratory interview study. In *International Conference on Internet Science* (pp. 194-208). Springer, Cham.

Gupta, N.K., Rahim, M.G. and Riccardi, G., AT&T Corp, 2007. *System for handling frequently asked questions in a natural language dialog service*. U.S. Patent 7,197,460.

Joshi, N. 2019. *Forbes*. [online] Available at: <https://www.forbes.com/sites/cognitiveworld/2019/06/19/7-types-of-artificial-intelligence/#47f9455233ee> [Accessed 25 October 2020].

Kiel, D., Müller, J.M., Arnold, C. and Voigt, K.I., 2017. Sustainable industrial value creation: Benefits and challenges of industry 4.0. *International Journal of Innovation Management*, *21*(08), p.1740015.

Peng, Z. and Ma, X., 2019. A survey on construction and enhancement methods in service chatbots design. *CCF Transactions on Pervasive Computing and Interaction*, *1*(3), pp.204-223.

Ramachandran, A., 2019. User Adoption of Chatbots. *Available at SSRN 3406997*.

Shrivastava, S., 2017. Digital disruption is redefining the customer experience: The digital transformation approach of the communications service providers. *Telecom Business Review*, *10*(1), p.41.

Setiaji, B. and Wibowo, F.W., 2016, January. Chatbot using a knowledge in database: human-to-machine conversation modeling. In *2016 7th International Conference on Intelligent Systems, Modelling and Simulation (ISMS)* (pp. 72-77). IEEE.

Svahn, F., Mathiassen, L. and Lindgren, R., 2017. Embracing Digital Innovation in Incumbent Firms: How Volvo Cars Managed Competing Concerns. *Mis Quarterly*, *41*(1).
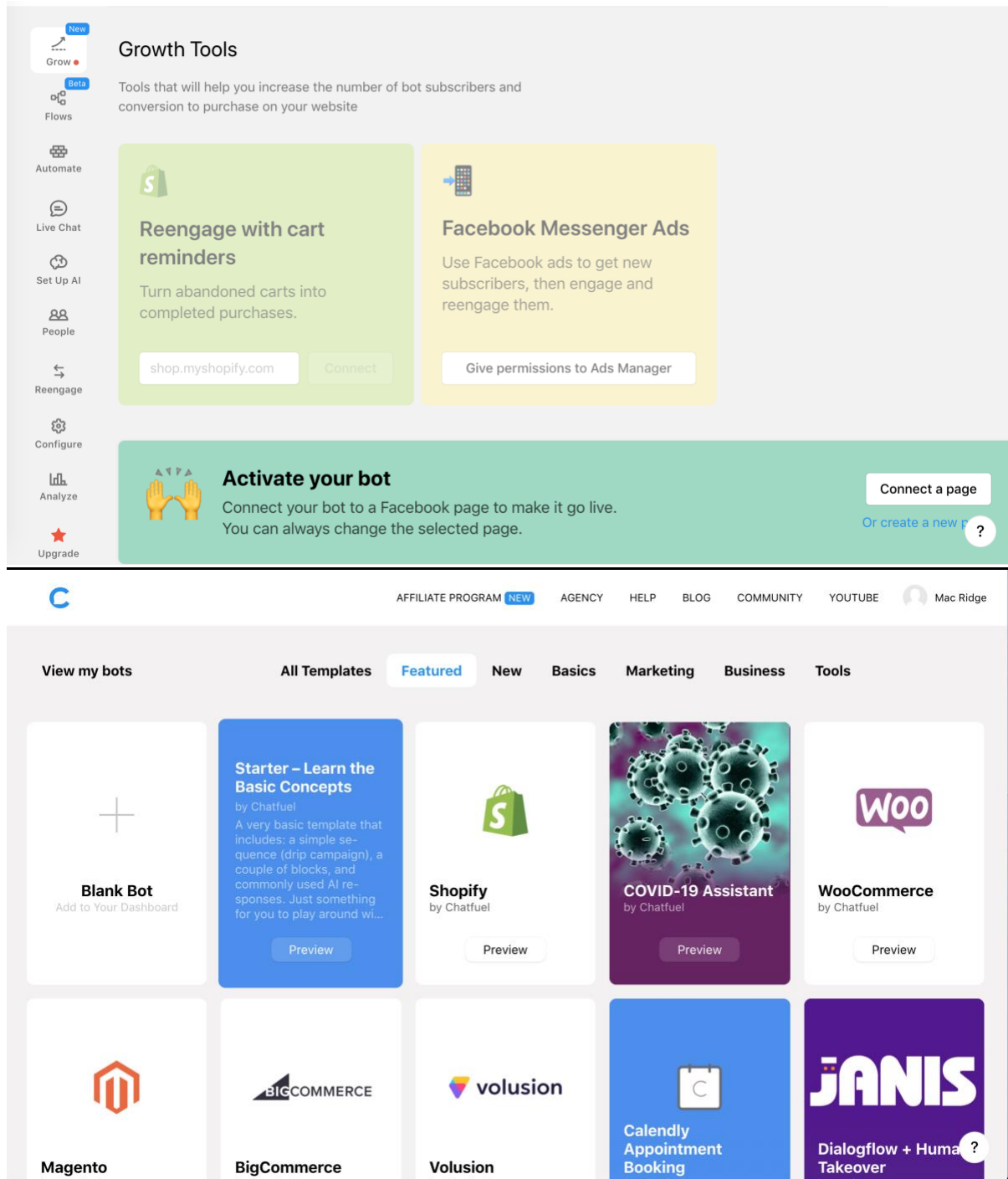
Tao, C., Wu, W., Xu, C., Hu, W., Zhao, D. and Yan, R., 2019, January. Multi-representation fusion network for multi-turn response selection in retrieval-based chatbots. In *Proceedings*

of the Twelfth ACM International Conference on Web Search and Data Mining (pp. 267-275).

Wayland, R.E. and Cole, P.M., 1994. Turn customer service into customer profitability; to maximize your firm's value, think of customers as a business asset. *Management Review*, *83*(7), pp.22-25.

APPENDICES

A Chat Fuel Screen grabs

B FLOW XO Screen Captures

Bots

You haven't add

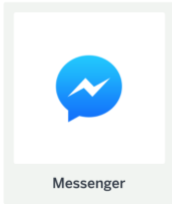**Create a Bot**   Help ✕
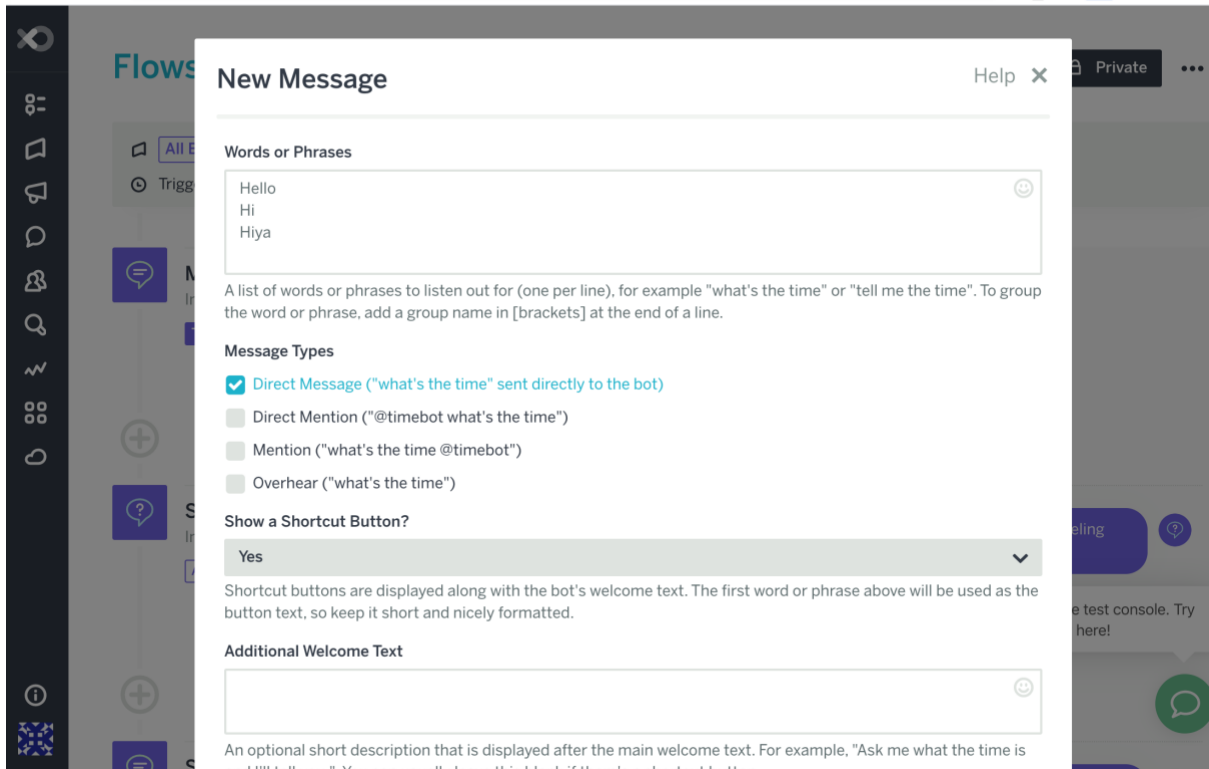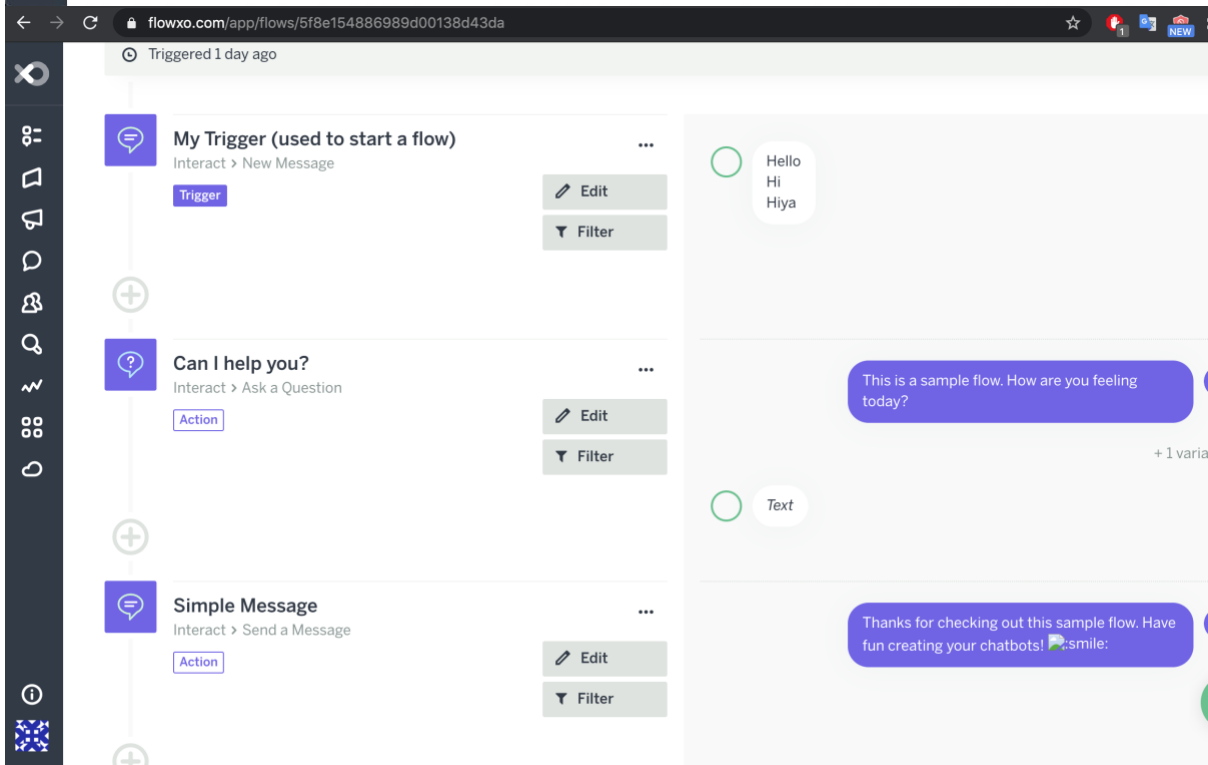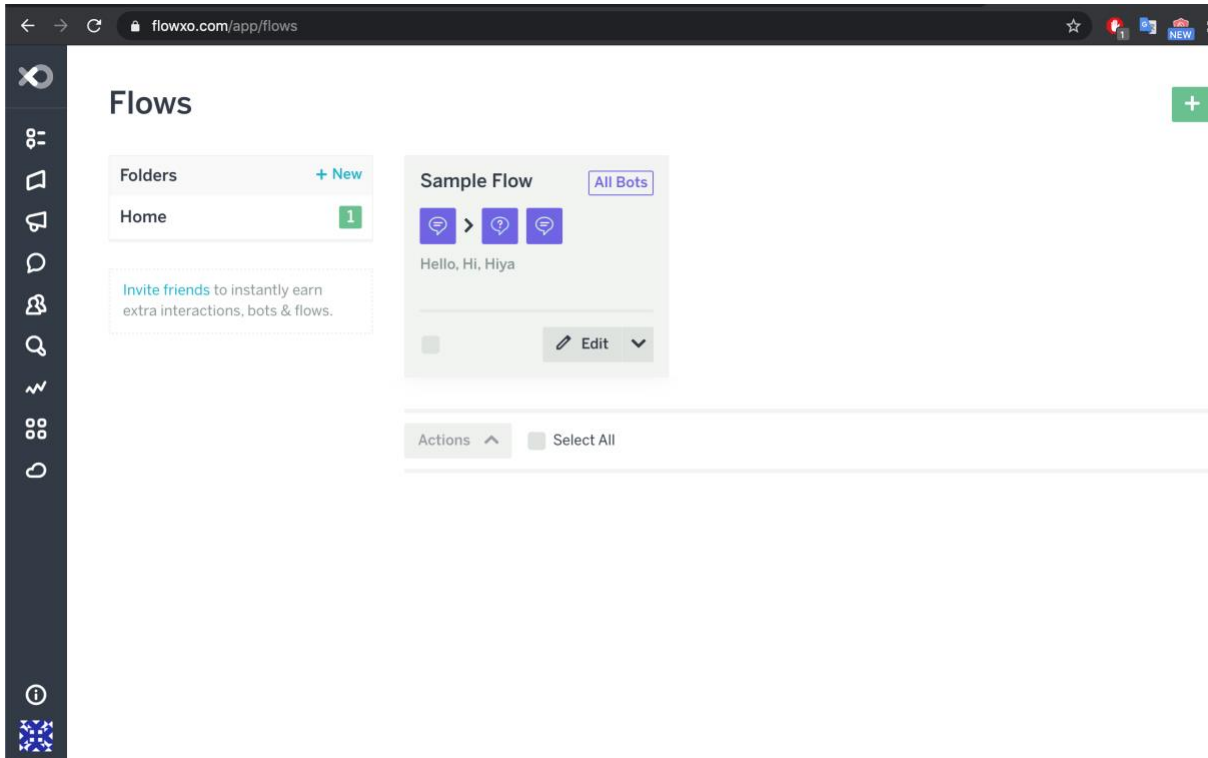
Messenger

ⓘ Before you go any further, open up our detailed instructions for creating your Messenger bot.

Name

Matt Bot   ☺

This is how the bot announces itself if you leave the welcome text blank.

Welcome Text

Hello I am chat bot how can I help you!   ☺

Leave this blank and we'll take care of this for you. This will be displayed when your bot is first connected (some platforms) and as a default response.

☐ Show the welcome text even if a catch-all trigger is found

Language

English   ⌄

Greeting Text

☺

A greeting that is shown to your users before they click the 'Get Started' button. It should be a short (160 character) description of your bot.

+ New