

EXPERT INSIGHT EBOOK: **CHATBOTS IN CX**

CX Network looks at the examples of three very different organizations – a large private company, a charity and a government body – to find out the role chatbots have played in transforming their front-facing services.

DISCLAIMER:

The information in this piece does not constitute as legal advice and so should not be regarded as such.

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Foreword

Customers are more willing than ever to place their money with competitor brands if they can be promised better experiences. A recent survey by [Oracle](#) found that of 1,100 respondents, 43 per cent had blacklisted brands that failed to meet expectations. Customers today have little patience for inconvenient service from brands and prefer interactions to be on their own terms.

To fast track issue resolution times and empower customers to take control of their own experiences, brands are beginning to recruit a new breed of staff member: [chatbots](#).

When implemented correctly, chatbots can provide significant business benefits. They can rapidly respond to large volumes of customers simultaneously, which shrinks the strain on human agents and, in some cases, can reduce cost-to-serve levels by as much as 30 per cent, [according to recent a study by Deloitte](#). As chatbots can administer customer care outside of standard business hours, they can also meet the 24/7 availability many customers desire.

When used incorrectly, however, chatbots can become an expensive distraction for businesses and greatly damage customer experiences at scale. Implementation mistakes can result in a long list of failures that frustrate customers.

Here, CX Network presents key learnings from three CX experts at brands that are experimenting with chatbots: **Heineken, Calderdale Council and Versus Arthritis**. The lessons from each case study offer advice for CX practitioners on how to successfully integrate chatbots into their customer journeys and avoid the common growing pains of implementation.

Expert Insight Ebook: **Chatbots in CX**

DEFINITIONS



CHATBOTS

“Single-purpose programs that focus on performing one function. Using rules, natural language processing (NLP) and very little machine learning (ML), they generate automated but conversational responses to user inquiries.”

“Task-oriented chatbots can handle common questions, such as queries about hours of business or simple transactions that don’t involve a variety of variables. Although they do use NLP so end users can experience them in a conversational way, their capabilities are fairly basic. These are currently the most commonly used chatbots.” – [Oracle](#)



VIRTUAL ASSISTANTS

“These are much more sophisticated, interactive and personalized than task-oriented chatbots. These chatbots are contextually aware and leverage natural-language understanding (NLU), NLP and ML to learn as they go. They apply predictive intelligence and analytics to enable personalization based on user profiles and past user behavior.” – [Oracle](#)



LIVE CHAT

A service that allows human agents to communicate with website users using instant messaging, your brand ahead of competitors at an early stage.

Expert insights

Page 4. Case study: Heineken:

Be methodical when building solid foundations for your chatbot



Julie Wilson

Head of hub and customer experience,
Heineken

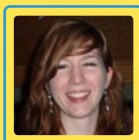
Page 5. Case study: Versus Arthritis:

The importance of using reputable data to inform a chatbot



Ellen Ward

Delivery manager, AI and
virtual assistant, Versus Arthritis



Danni Coxon-Smith

Senior digital content editor,
Versus Arthritis

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Lessons from 20 years of conversational AI

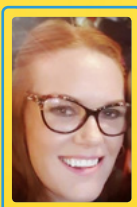


Patrick Nguyen

Chief Technology Officer,
[24]7.ai

Page 9. Case study: Calderdale Council, UK:

Start small, prototype and action feedback



Toni Kershaw

Customer access manager,
Calderdale Council



HEINEKEN: Be methodical when building solid foundations for your chatbot

It is important to lay the required groundwork so that chatbots have the information and data they need to provide seamless experiences, otherwise brands can expect severe fragmentation to occur. In a US study conducted by [Spiceworks](#), 59 per cent of respondents stated their company's chatbot often misunderstood the nuances of human communications, which can often result in session abandonment.

Here, **Julie Wilson, head of hub and customer experience at Heineken**, discusses how the newly formed CX team at the brewing company is diligently preparing to implement sophisticated chatbots. Tactics include partnering with companies that are the right fit for the business and avoiding a rushed roll out on inadequate foundations.



JULIE WILSON
Head of Hub and Customer Experience, Heineken

Heineken's interest in chatbots and AI stems from its desire to offer top-dollar CX. Wilson says that the journey to stellar CX starts with a solid awareness of the brand's specific experience improvement areas. To address these areas, businesses need to assess the available options and identify the strategies that will bring the best returns.

"2019 was really about investigating and educating ourselves on how we can improve, remarks Wilson. "2020 and beyond will be about implementing these strategies and reaching for the stars. But when we implement technologies, we want to do them right which is why we started working with Genesys who we have worked with to deploy our live chat."

Wilson explains: "We have brought in live chat, but the real goal is to evolve into chatbots and to move into automation. That is why we recruited a project team to clarify the potential business benefits available if we increase customer satisfaction through means such as chatbots. We wanted to know how the technology could strengthen customer retention."

ACQUIRING THE RIGHT TALENT AND EXPERTISE

Heineken's CX team was assembled by sourcing members from organizations already utilizing coveted tech stacks. The expertise of these members and that of third-party companies was "fundamental to our success" in 2019, says Wilson. She adds that this set up provided "the potential to not just build a network but the architecture needed to deliver a proactive customer experience".

"Implementing technologies such as live chat has already given us instant wins, providing our customers

with new channels of choice and increasing our CX capabilities," she notes.

With all this expertise it can be tempting to rush into roll outs on instincts and gut feelings, but Wilson reiterates that a methodical approach is the wisest path to follow.

"While these partnerships and new team members are excellent starting points and we have a huge drive to bring our customers online, return on investment (ROI) is very important to Heineken, so it is vital we meet expectations with the solutions that provide the best business returns," Wilson concludes.

LESSON



Heineken demonstrates that preparation is key with chatbots. Start small, familiarize yourself with the technology and take stock in third-party expertise. A methodical approach that features a focus on de-risking roll-out stages will generate confidence from stakeholders when working to obtain budget and prove ROI.

VERSUS ARTHRITIS: The importance of using reputable data to inform a chatbot

Versus Arthritis is the UK's largest charity dedicated to arthritis support. The fundraising body recently turned to chatbots to offer personalized advice to arthritis sufferers.

Ellen Ward, delivery manager, AI and virtual assistant, and Danni Coxon-Smith, senior digital content editor, both of Versus Arthritis, explain how the charity built and trained a chatbot that comforts countless patients in pain at night with helpful insights.



ELLEN WARD

Delivery manager, AI and virtual assistant, Versus Arthritis



DANNI COXON-SMITH

Senior digital content editor, Versus Arthritis

THE VISION

As the charity works with people in a lot of pain, Ward notes that it is vital the body provide frictionless experiences for customers. The firm decided to launch an AI tool named AVA to support people at scale two year ago. It is thought there are more than 100 different

types of arthritis, each with bespoke symptoms. AVA filters through information on the various versions of the disease to deliver accurate and personalized answers that empower users to manage their conditions to improve their quality of life, from prognosis to determining what diet changes they should make.

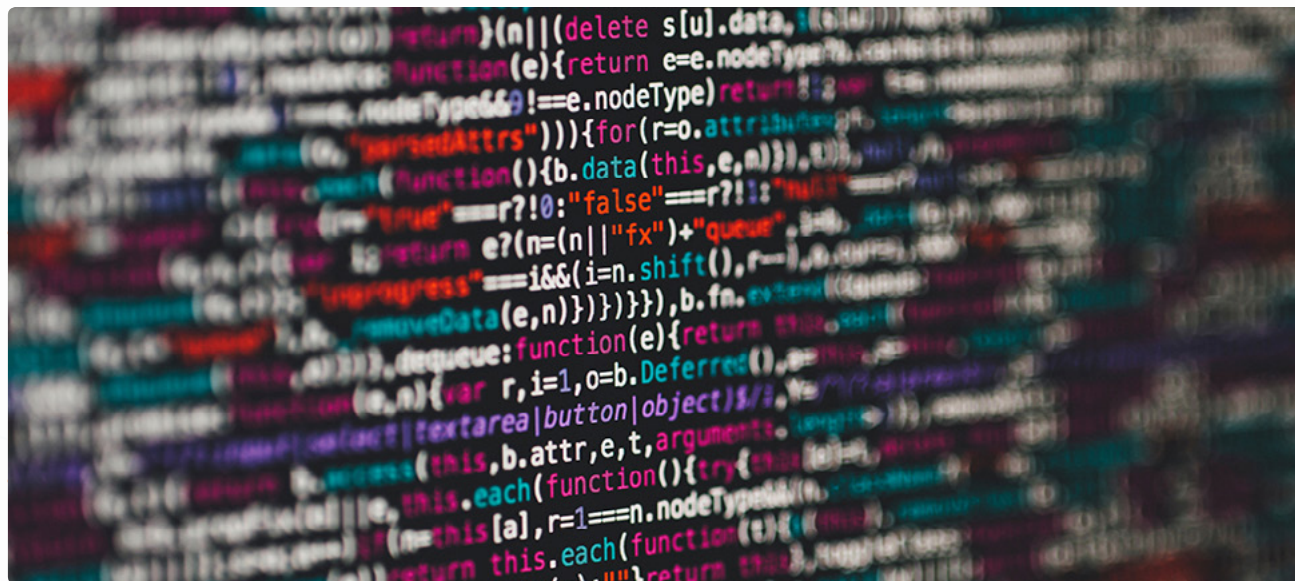
The tool is accessible 24/7, so if users are in pain during the night, they can speak to the bot for support and solutions. The tool's reception has been positive overall, with AVA having completed more than 21,000 conversations and witnessing 2,400 users return to chat.

Versus Arthritis has even seen many individuals emotionally confide in AVA regarding elements of conditions that can be difficult to discuss with family members or friends.

THE IMPORTANCE OF INPUT

The success of the tool is rooted in the integrity of the tool's data input. Using the machine-learning power of IBM Watson, AVA is plugged into 80 years of world-leading medical research papers and studies.

Searching through the mountain of insights to serve



» VERSUS ARTHRITIS: The importance of using reputable data to inform a chatbot

users with the nuggets that are relevant to them so they can make informed decisions.

TEST AND LEARN

To improve the service overtime, Ward and her team regularly monitor AVA's conversations and use visualization analysis to better align interactions, as well as to track trends and hot topics people want to learn about. The chat-log monitor hosts an aggregation of the conversations from the previous month to assess the success of conversations and their routes. This log is connected to the development team so they can implement changes to prevent these issues arising in the future.

The common topics of discussion are condition cause, prognosis, treatments, diet and family life. The breadth and depth of the questions help to illustrate that more information is needed, which the team is in the process of developing. There is a vast amount of information out of AVA's reach including the likes of old booklets, magazines and surgeries. At the moment the bot will attempt to direct the user to a suitable third-party source if it does not have the desired information.

Next steps for the team are to implement NLP to expand AVA's vocabulary so it will be able to understand a wider variety of taxonomy in its interaction with users. This

will lead to fewer mistakes from the bot and quicker resolution times.

Another project on the horizon is to enable AVA to use predictive text to pre-empt what people may ask as to reduce the need for typing for the user.

LESSON



Chatbots are not a launch-and-forget type of project. You must monitor and nurture their growth, so that day by day they can better serve customers.



CHATBOT METRICS



Use these metrics to track your bots:

Handling rate

Number of chats the bot has completed successfully without human intervention.

Topic based volume

The percentage of chat topics covered by the bot in comparison to agents,

Call hand-off rate

Number of chats that require human intervention.

Mistake rate

Percentage of chats in which the chatbot provides the wrong information or misunderstands the user.

Repetition rate

Number of times the chatbot asks users to repeat their query due to lack of understanding.

If you notice a change in these metrics, identify the trouble areas by mapping the topics that feature in the cases affecting your bot's performance. This will inform the areas where your bot needs more training or information.

[24]7.AI: Lessons from 20 years of conversational AI



PATRICK NGUYEN

Chief Technology Officer,
[24]7.ai

In 2001, Nguyen co-founded Voxify, a conversational IVR company that automated customer service calls for leading brands such as United/Continental Airlines, Avis Rent a Car, The Hartford Insurance and MetroPCS.

After acquiring Voxify and Microsoft Tellme in 2012, [24]7.ai created a market-leading platform for chatbots and speech bots that combines AI and human agents to deliver customer experiences across all voice and digital channels.

Here, Patrick Nguyen, chief technology officer at [24]7.ai shares some of the wisdom he has acquired in the world of conversational AI over the last 20 years.

Conversational AI is known for its capability to shoulder significant customer care burdens. What are the most impressive results you have encountered with virtual assistants?

A virtual assistant deployment is a journey, not a destination. The perpetual goal is to increase the containment rate (i.e., the percentage of interactions that are resolved without requiring live agent assistance).

You should start by automating the highest-volume, least-complex customer intents, such as FAQs and basic informational queries, which may provide 10 – 20 per cent containment.

Over subsequent phases, you then tackle the increasingly difficult transactional intents that require more conversational turns, more business rules, and access to more backend systems.

When an enterprise invests in the design and development of its virtual assistant to handle a broad range of transactional intents, containment can reach levels as high as 80 – 85 per cent, which represents huge savings in terms of agent time and effort.

What is the best methodway to determine if a chatbot is a good fit for a brand's customer base?

Similar to a human agent, a chatbot can be evaluated by its resolution rate and CSAT/NPS. Another useful metric is engagement rate, which measures how willing consumers are to try the bot and exchange a few messages rather than immediately ask for an agent.



» [24]7.ai: Lessons from 20 years of conversational AI

Two implementation pitfalls to avoid with chatbots and virtual assistants:

First, never deploy a chatbot or virtual assistant without offering escalation to a human agent in the same channel. AI will never be perfect enough to automate 100 per cent of interactions, so the agent option should be available to provide an acceptable customer experience. To make it worthwhile for customers to engage with the bot, any escalation should also pass the context of the conversation, so the agent does not start from scratch but rather is aware of the problem and knows what the customer has already tried.

Second, do not deploy a chatbot or virtual assistant without a plan for ongoing monitoring and tuning. Over time, developments in the company's business and shifts in customer behavior lead to changes in intents and how customers express those intents. If the bot's AI models and conversation flows do not evolve in line with these changes, performance will decline and degrade the customer experience. Chat transcripts should be continually mined to discover new intents. Processes should be in place (preferably automated) to analyze failed conversations: if customer intents are misclassified, training sets need to be updated to reflect new language and expressions; if bot conversations are ineffective, flows need to be redesigned to improve resolution rates.

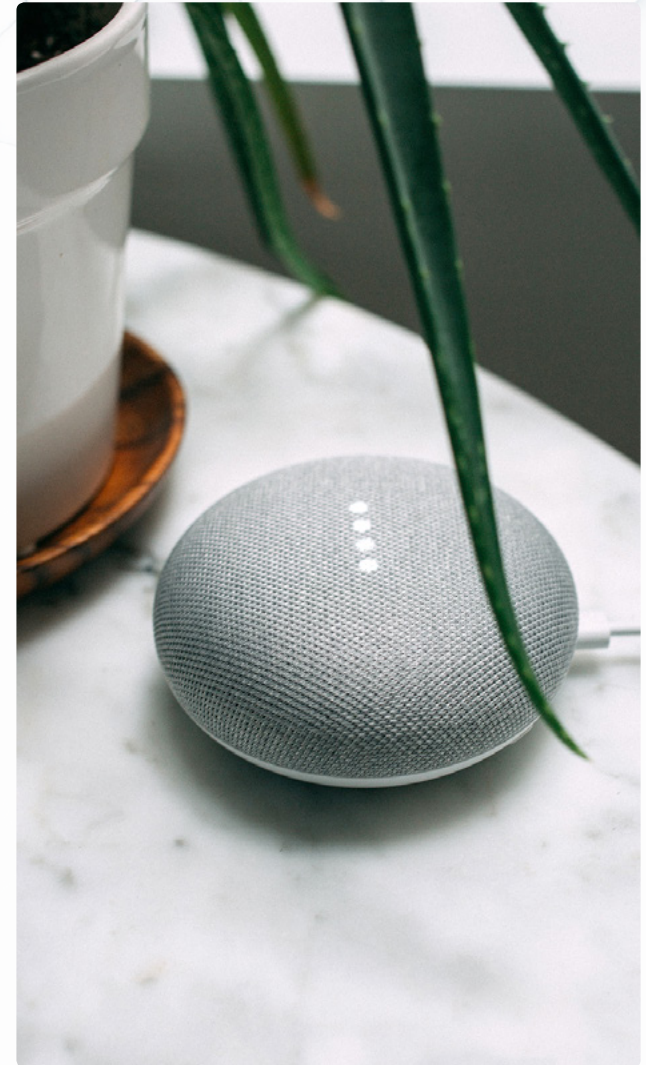
Your golden rule for brands upgrading from chatbots to more sophisticated virtual assistants:

When upgrading from basic chatbots to sophisticated virtual assistants, conversational design becomes increasingly important. AI is essential, but not sufficient. Transactional intents require more complex conversation flows to collect user information and execute business rules. Without design thinking, virtual assistants can result in failures that frustrate customers, erode the expected ROI and possibly damage the brand. Human-to-machine dialogue flow must be crafted to guide the conversation to a successful outcome by addressing the customer's expectations and assumptions as well as the company's priorities and constraints.

"Without design thinking, virtual assistants can result in failures that frustrate customers, erode the expected ROI and possibly damage the brand."

PATRICK NGUYEN

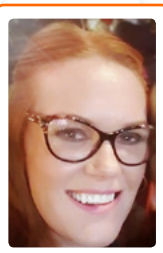
Chief Technology Officer, [24]7.ai



CALDERDALE COUNCIL, UK: Start small, prototype and action feedback

Toni Kershaw, customer access manager for Calderdale Council in the UK, tells us how government austerity policies in the UK sparked a digital transformation at Calderdale Council which led to the body becoming one of the first local authorities in England to provide 24/7 live chat.

This was the first step toward its roll out of virtual assistant VIRA which was projected to have the capability to handle up to 80 per cent of council tax queries – one of the most complicated areas of council services. The virtual assistant has the potential to spare the council's human agents from significant customer care burdens.



TONI KERSHAW
Customer access manager,
Calderdale Council

Kershaw and her team met some initial skepticism from internal stakeholders about implementing live chat, but after assessing data that mapped customer needs, Kershaw recalls: "We truly believed that it would transform the customer's experience of interacting with the council."

The pilot was rolled out within eight weeks, Kershaw

said: "We implemented it rather quickly but we also did it fairly quietly. We had heard a few horror stories about how chat functions can fail, because of teams not being prepared for the contact volumes and we definitely didn't want to start with customers receiving a busy message."

A monitored inbox was used to manage the chat and on launch Kershaw recalls this was practically a full-time job due to the large influx of tickets.

Within the first two months, the council received around 150 pieces of feedback from customers that were used to optimize the website and service.

"It was brilliant because we got real-time feedback, we were able to act on it straight away and then say to the customer we've fixed that link for you. In most cases they were quite impressed and grateful. That sort of feedback is invaluable to us," says Kershaw.

The body even advanced to provide preemptive support to customers, says Kershaw.

"Proactive chat has been a brilliant tool for us," she notes. "It allows us to say to customers: 'You seem to have been on this page for a long time, are you struggling with anything?' We can then assist them before they leave the page and we lose them."

In early 2019, the council took their chat offering to the next level by rolling out a virtual assistant.

First, the team examined live chat transcripts and emails to create a pool of 40 query topics. These topics, which included the likes of 'Can I change my address? Can I amend a direct debit?', and their relevant responses were loaded into VIRA, the virtual assistant. Some topics were flagged to automatically escalate to live agents, including the likes of mental health issues or death reports. Variations in language had to be considered to minimize the chances of VIRA asking the user to reword their question.



» CALDERDALE COUNCIL, UK: Start small, prototype and action feedback

Within the first few months VIRA was running at a 70 per cent success rate with chats in and out of office hours. Unanswered cases would be escalated to human agents.

Seven weeks after rollout, the team continued to monitor VIRA and improved its responses to streamline experiences for users. Frequent meetings were held to review and test interactions, with more information added to boost success. Users were initially asking lengthy and complicated questions, so the bot was adapted to request that customers keep questions short and simple.

Early tests have indicated that VIRA has the capability to handle up to 80 per cent of council tax queries – one

of the most complicated areas of council services.

VIRA has been handling waste enquiries since December 2019 and is successfully answering almost 80 per cent without escalation to a human agent. This has been a great way of helping us manage seasonal demand, in particular through the recent flooding crisis. A Christmas recycling campaign was used to launch this initiative where customers could 'Ask Vira' what they could recycle over the festive period which proved to be very popular.

Looking ahead, the team will continue to examine VIRA and will refer to usage stats and customer feedback questionnaires to guide their steps on how

best to educate VIRA and give it new functionalities – like the ability to cope with longer questions.

LESSON



To reach a point where human agents are freed of certain repetitive tasks, a steady and continuous test and learn approach is best. Live chat can be useful learning arena that will facilitate a smooth entry into advanced chatbot capabilities like virtual assistants.

FINAL REMARKS

Chatbots have emerged as a handy channel to shoulder some of the burdens in customer care.

With customers becoming more accustomed to the benefits they bring, the pressure is on for brands to ensure they implement chatbots strategically and systematically to minimize disconnections and mistakes from the bot.

To win confidence and budget from internal

stakeholders, businesses should prove ROI by implementing a methodical approach backed by solid expertise in the technologies available and the necessary support structures for chatbots.

These systems are not a launch-and-forget type of project. They need to be consistently monitored and nurtured, so they can better serve customers. This process of iterative improvement will allow businesses to reach a point where human agents are freed of certain repetitive tasks.

The interactions and conversation transcripts from live chat tools can be useful for facilitating a smooth entry into advanced chatbot capabilities like virtual assistants.

Strategies that deploy these learnings will ensure that a tool which is capable of providing exceptional customer care does not descend into a culprit guilty of causing customer experience chaos.

About CX Network

CX Network is an online resource for customer experience professionals providing value-rich content such as industry reports, customer trends, best practice, latest industry news, interviews with CX leaders and so much more! Our focus on the content that matters to customer experience leaders most, allows us to cut through the white noise that surrounds this ever-changing subject, and makes us the primary resource for CX executives to turn to.

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A man with short brown hair, glasses, and a beard is smiling while looking at his smartphone. He is wearing a grey jacket and a thick brown scarf. The background is a blurred outdoor setting, possibly a city street. In the top left corner, there is a large light grey circle with several smaller orange circles scattered around it.

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