eGUIDE
THE ROLE OF
UX IN AI
CHATBOTS

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Introduction

The rapid rate of technological and digital advances is one of the biggest challenges for global businesses.[i] As new technology evolves, many organisations struggle to implement and integrate these products, facing problems with team structure, budget and gaining true understanding of the value.
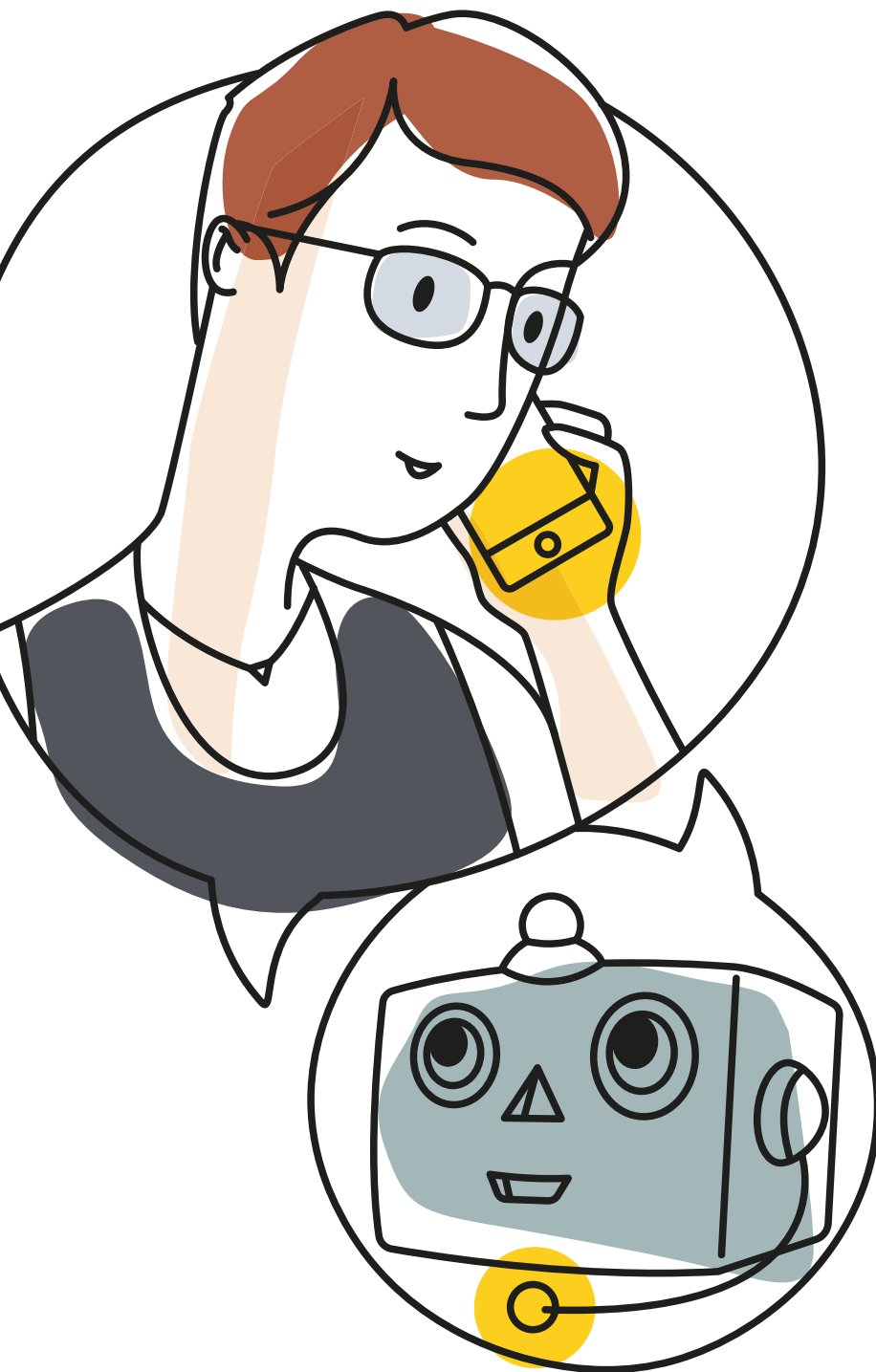
While artificial intelligence and chatbot technology create huge opportunities, the challenge for businesses is how they use these new products, justifying why they need to incorporate them, discovering how they will affect their customers and working out which teams should be responsible for designing and integrating the product.

As a result of these initial challenges, many customers are experiencing a negative user journey due to poorly researched or badly integrated technology. When more customers become despondent, disloyal or disengaged due to a negative experience, there will be an adverse impact on the organisation, negating any potential value that could be gained from using the new technology.

When it comes to deciding how, when and where to use artificial intelligence, organisations need to implement a customer-focused approach, rather than a strategy driven purely by technological advances or business needs.
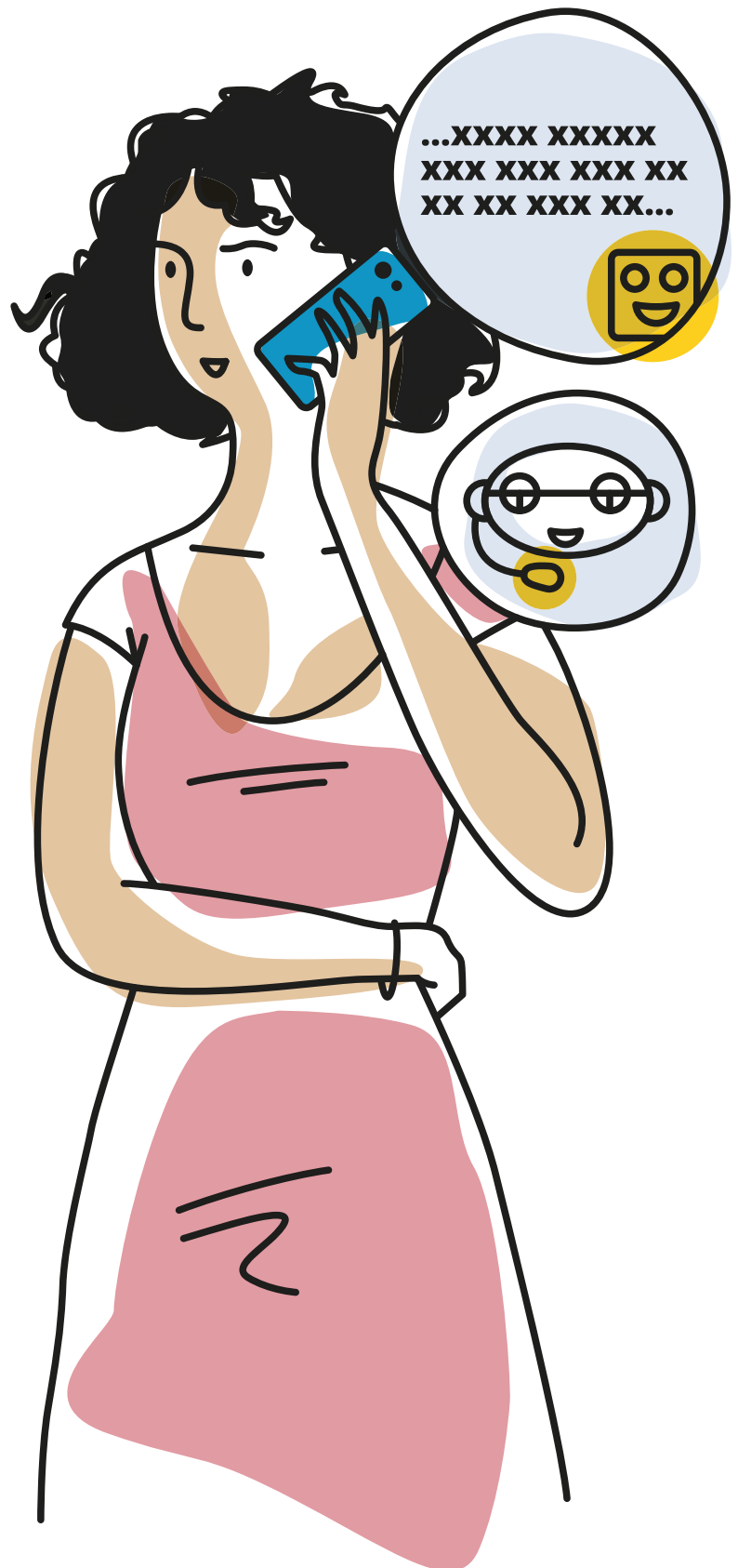
The rise of the chatbots

A chatbot (short for chat robot) is a computer program that mimics conversation with people using artificial intelligence technology. It is often a layer on top of, or a gateway to, a service and is specifically designed to replicate human interaction.[ii]

Despite the origins of this technology dating back to the 1950s, the current resurgence in the popularity and advancements in chatbots has been fuelled by 3 major factors:

- An increase in the use of messaging apps

- Advances in artificial intelligence, speech recognition and cloud integration technology

- Endorsement from leading organisations such as Facebook, and popular use of digital assistants such as Amazon's Alexa

Chatbots are becoming particularly prevalent in the online marketplace, where businesses can see improvements for customers and potential cost savings. From banking and retail to fashion or travel, a wide range of organisations can benefit from using chatbots.

How chatbots are used in business

In some situations, chatbot intervention can be relatively simple and instantly effective – an organisation which gets a lot of repeat business that is very similar in nature or identical to previous orders could easily see the benefits. This type of chatbot could be linked to customers' records and previous purchases to identify their preferences and provide users with straightforward options and information on alternatives, if necessary.

Similarly, if the organisation receives multiple or repetitive enquiries (such as opening times, product range etc), a fairly simple bot could be loaded with basic information and assist customers by recognising their keywords or phrases.

Benefits of chatbots for businesses and consumers [iii] [iv]

Engagement
Conversation comes naturally to humans. Chatbots are an easy and accessible way for people to interact with a brand or product and can help those who aren't confident with technology.

Scalability
A single chatbot can handle thousands of conversations at the same time, increasing efficiency. This means that from a business perspective, many tasks can be performed at a lower cost.

Personalisation
As chatbots learn from its user over time, they can eventually deliver an extremely personalised experience, benefiting the consumer and giving the business an understanding of their customer.

Convenience
Consumers using virtual assistants can quickly manage multiple tasks in one place.

Versatility
The applications of chatbots are virtually limitless. They are already covering everything, from customer service to weather forecasting.

Costs
Chatbots can cut costs in industries where there are large volumes of human interaction. Currently chatbots cut business cost by around $20 million per year worldwide and new research has predicted that this could increase up to $8 billion by 2022.
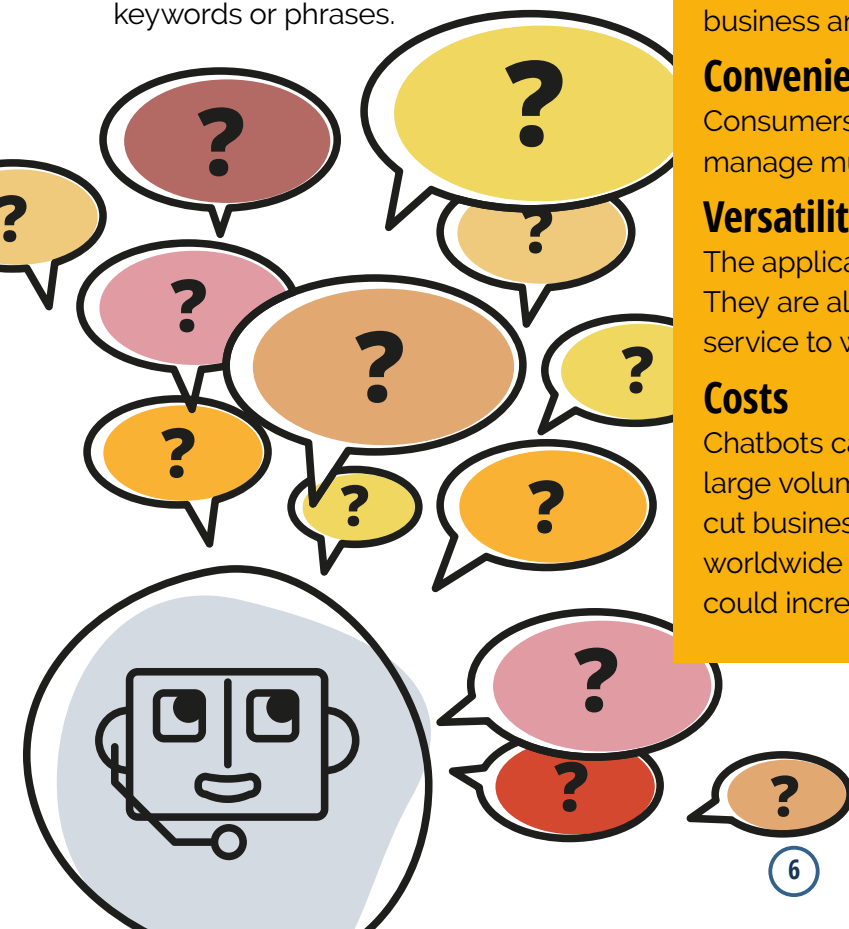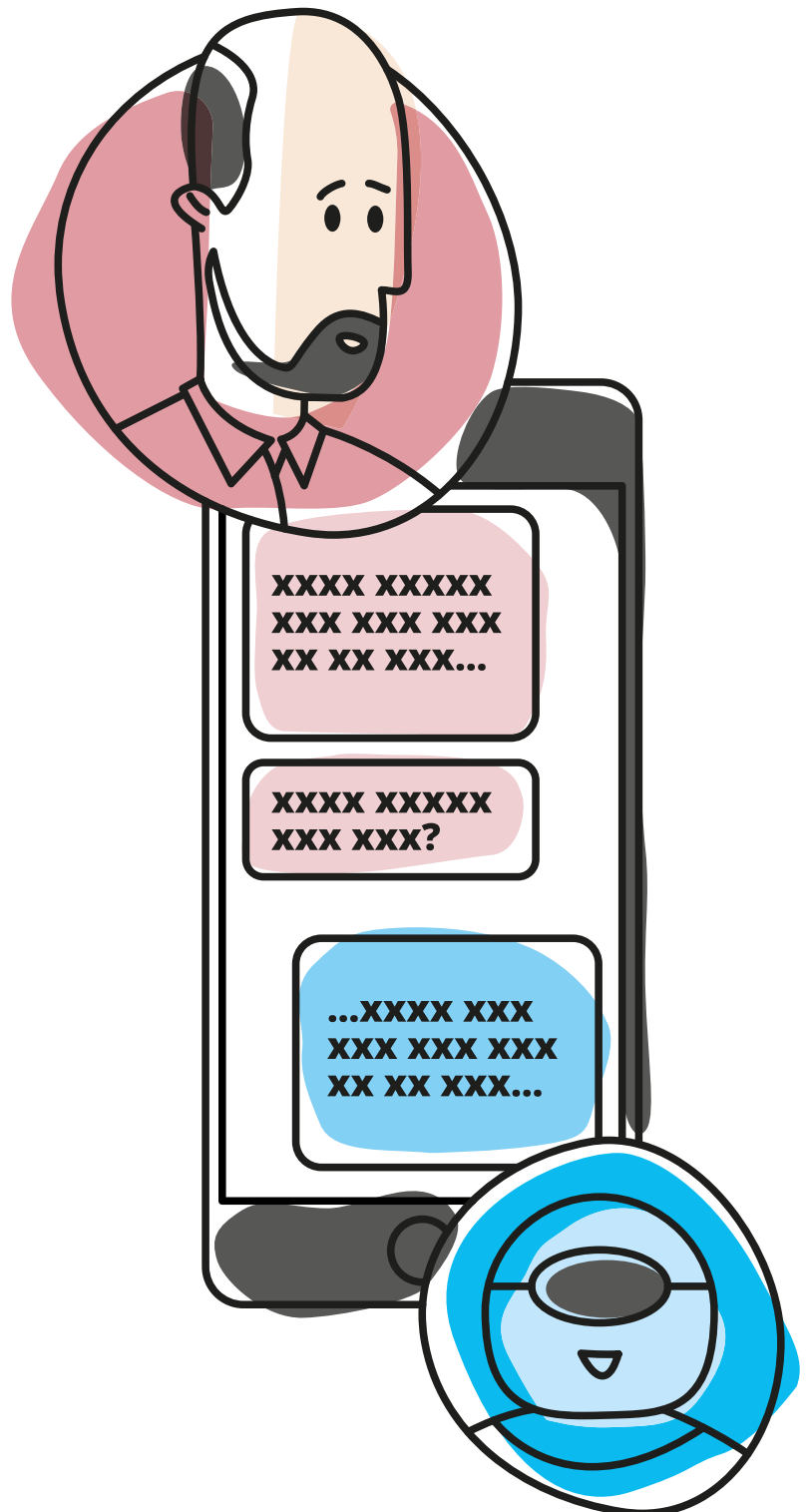
Chatbots and artificial intelligence

There are generally two variants of chatbot:

1. A pre-programmed bot which follows a set of rules, triggers and flows to respond to commands.

2. A bot using machine learning, algorithms and natural language processes to pick up new information from the user and learn from previous conversations. This type of chatbot becomes more intelligent over time.

Research suggests that while many consumers may have previously been wary of AI or automated technologies, 70% now expect to use messaging apps when talking to a business and over 60% prefer to use an automated self-service option when it comes to customer service.

Businesses can also see the benefit of streamlining these simple interactions, as they provide automated solutions to common time-consuming or resource-draining areas such as customer service.

By reducing resources and increasing efficiency, bots can save businesses money. And with effective machine learning, businesses can gain valuable data, customer insight and consumer habits – all of which are vital for improving customer experience, increasing customer reach and making more profit.

Problems for customers

A Forrester paper of May 2019 outlines the challenges faced by website teams using artificial intelligence and chatbots:

"Today, many firms are choosing to leverage AI and automation to complete, augment, and personalize customer service agent interactions to deliver improved customer experience (CX) across channels. Unfortunately, most conversational platforms lack the critical capabilities and business-friendly usability necessary, leaving CX teams struggling and customers unsatisfied. To best reflect the needs of the customer, firms must offer easily configured, well-integrated, and highly personalized chatbot experiences that are specifically tailored to the interests, context, and behaviours of the user."[v]

While the technology around AI and chatbots is increasing rapidly each year, organisations don't necessarily have the knowledge to effectively put them to the best use. This can lead to problems for the organisation in question, as well as their customers.

Many chatbot solutions lack the most important functionalities and requirements for a business:[vi]

- Understanding the value of the customer and their history with the company

- Providing personalised responses to each customer

- Automating actions based on customer responses

- Understanding the customer's context

- Leading users through an automated dialogue to clarify intent

- Providing real-time insights to agents

- Identifying customers and address them by name unprompted
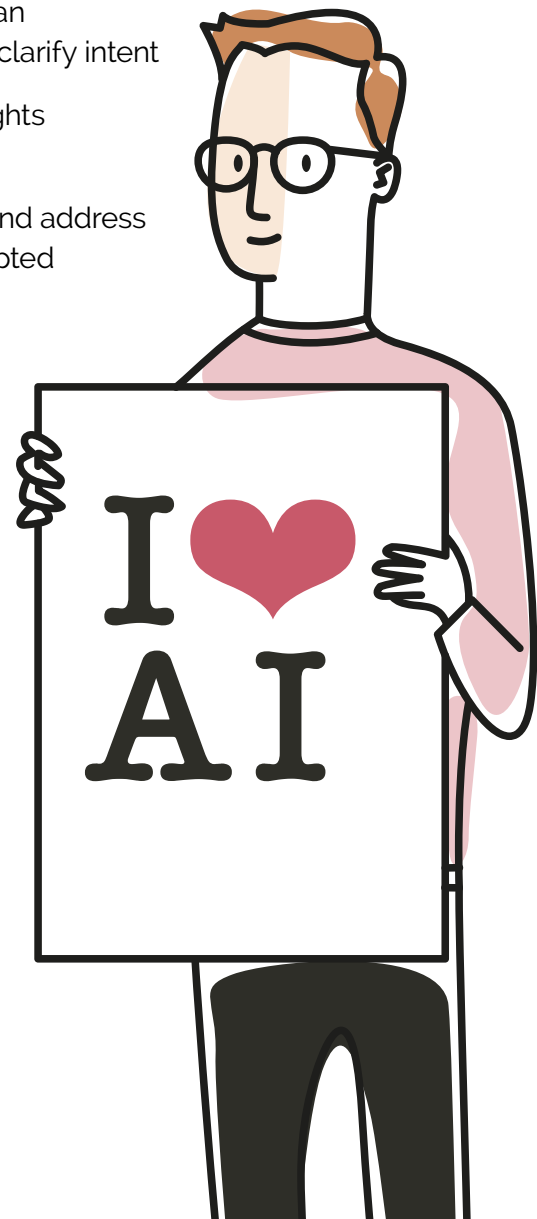
A potential consequence of these technical shortcomings is a negative customer experience. Customers can become frustrated with ineffective chatbot services, become less engaged and defer back to live agents, creating additional workload for the organisation.

What's more, if their interactions with chatbots aren't sufficiently personalised, they're less likely to rate their experience highly or make a return visit.
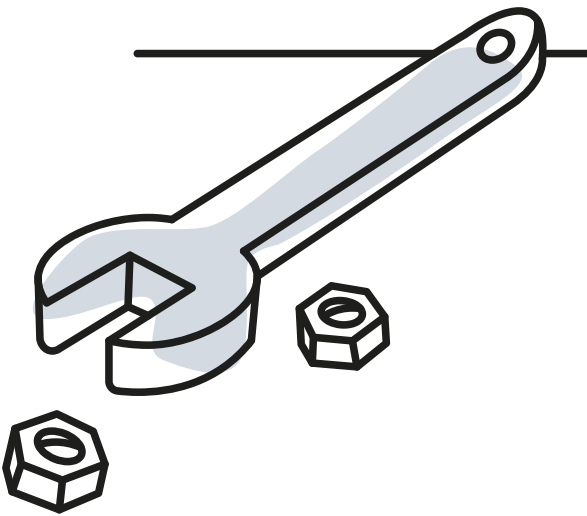
Common user experience problems with chatbots[vii]

1. Insufficient vocabulary and understanding to deal with user requests – if the bot cannot process and understand a wide enough range of requests it will be unable to fulfil its primary function of helping the user.

2. Too much scope and use of broad language – if the purpose of the bot is too general or too large, it's likely to fail. Focusing down makes it easier to create a bot that can provide helpful responses and information for users.

3. Insufficient attention paid to likely user pathways and sequences – leading to poor understanding and therefore a lack of meaningful responses for the chatbot to select or formulate from.

4. Lack of user testing – the bot needs to be tested to determine how it will work or deal with unusual queries: if the owner doesn't know how users react and interact with it, the service can't be improved.

5. Lack of help for users – in determining how to frame questions, what sorts of options and pathways are open to them, what the bot can (or can't) do.

6. Insufficient integration – with business model or user information, buying patterns and other critical data: this can cause repeated (and annoying) questioning from the bot leading to customer frustration and possible abandonment.

7. Lack of human backup – or default escalation procedures when the bot gets into difficulty

8. Irrelevance or lack of clear purpose – it should be apparent what the bot is for and what it can do. Users will quickly become disillusioned if it can't do what they expected.

9. The chatbot is boring – while the bot is a tool it does need to engage and hold the user by either entertaining or providing useful information in a pleasing way and context.

Problems for businesses

While AI and chatbots offer a great deal of benefits and future potential for both businesses and customers, the technology is being held back by the way in which companies choose to incorporate it.

While they're aware that using AI is important, many organisations are struggling to determine the ROI, having difficulty working out who owns the AI products, and determining what AI products to use to best suit their customers.

1. Lack of personalisation

Only 21% of organisations say their customers' experiences are highly personalised today. However, nearly two-thirds of these same teams plan to have highly personalised interactions within two years.[viii]

One of the most effective ways to create personalised experiences is with user research and customer-centric design. When designing conversations with consumers, a number of UX principles should be kept in mind:[ix]

- Try to anticipate topics that users are likely to raise and provide the chatbot with enough options and vocabulary to respond helpfully

- Use language and phrases that are likely to engage customers, rather than sounding too formal, technical, patronising or negative

- Chatbots should not antagonise, overload or persist with providing information if the user is disengaged or uninterested – make sure responses are focused and relevant

- Chatbots should be able to recognise questions posed in different ways and only provide responses that answer the question

- Personalise the message to the user: address them by name, make it feel as though the information is tailored specifically for them and reflect back the information which the user has provided, to show it has been absorbed and understood

- Make the conversation a natural progression – explain what is happening and where they are going. Make suggestions as to what they might do next and gradually reveal the features and elements available to them.

Most useful AI/Automation technologies for personalising customer interactions:[x]

- **Predictive chat**
- **Chatbots/virtual agents**
- **Machine learning**
- **Predictive routing**

2. Insufficient information or data architecture

When organisations first begin to use AI or chatbots, there's a lack of historical information and data on which to base the first iterations of technology.

Most organisations want to use chatbots to ultimately improve the user experience, so the user needs should be the first step in developing the role and purpose of the chatbot.

There are potentially two phases of chatbot/user interaction that need to be considered in development:[xi]

- The interface between the chatbot and the major platforms (Facebook, YouTube, Siri etc.) that they are likely to be accessed through. If the positioning and promotion works well in this area, there will be more referrals from these platforms, creating more information, more data generation and more business.

- The interface between the chatbot and the user, especially the initial exchanges which could determine whether the user persists with or returns to your chatbot.

How can chatbots help?

Product Identification and Access

Users can sometimes find it difficult to find a product on a site that meets their needs and specifications, no matter how specific their search description. If your chatbot can take the user information and convert it into precise product options that meet their needs, this will be perceived as a great asset to the user and a great boost to your site.

Customer Information

Another constant source of frustration for users is continually having to provide personal information or information requiring them to dig up documents or reference numbers to identify themselves and their purchases. If your chatbot takes basic information and relates it to a customer file containing all their past data and interactions, this will not only smooth the process but also impress and reassure the user that they are dealing with a business that knows what it is doing – and cares.

Understanding the Consumer Decision-Making Process

Customers don't always know exactly what they want, nor what is available to meet their requirements. If your bot is programmed to understand the nature of user needs and how products work together, they should be able to make suggestions and take customers on journeys that are beneficial and enlightening rather than frustrating and pointless.

Speed and Ease of Use

A chatbot should significantly improve the speed of interaction/search and the ease with which users interact with a site. This not only means a sense of improved experience but also more time and likelihood of return visits.

3. AI needs to be unique and tailored

Imaginative and creative use of AI technology can give organisations an edge over their competition by enhancing user experience. However an 'add-on' solution that is poorly researched or badly integrated may create a negative effect which does not reflect the expectations of the customer.

While many businesses use AI functionality simply to automate FAQs, there are opportunities to expand the use of AI and bots to reflect consumer needs and benefit business requirements.**xii**

I. **Collecting Customer** Information: you can use a bot to gather information about customers as they interact and use the bot for other purposes e.g. ask personal questions in an engaging and conversational way.

II. **Navigation Enhancement:** users still find navigating sites to be a challenge and anything that helps them, especially in a friendly and straightforward way could be advantageous to ratings and usability perceptions. A bot that guides people, explains options and verifies that they are heading in the right way can go a long way to providing an improved and positive user experience.

III. **Product Information Enhancement:** one of the biggest drawbacks users face with online purchasing is the lack of detailed, accurate information about the products they are looking at and comparing. It can often be difficult to fully understand the features of a product you are considering so the

ability to interrogate a bot and identify particular traits or benefits would be extremely useful and reassuring to users.

IV. **Upselling:** one of the biggest advantages of using bots is that if they are personable and engaging, they can also achieve subtle upselling. Friendly advice or helpful suggestions will be seen in a positive way by the user.

V. **Customer Recommendations:** similarly, if suggestions appear to be genuine attempts at helpfulness, directing the user to something else they didn't know or think about, there is much more likelihood of the customer regarding this as useful rather than intrusive or aggressive selling.

VI. **Personalising Your Service:** one of the best ways of engaging and retaining customer interest is by projecting a personality. This is one of the most difficult feats to achieve on a flat site but the addition of a chatbot can provide the platform to impress users in an entertaining and useful manner.

VII. **Reassurance and Feedback to Users:** a bot can provide reassurance to users that they are on the right track and feedback about where their choices are taking them so they can confirm or re-route as necessary.

VIII. **Customer Service:** when a user reaches a point in a conversation or process where direction to a person or part of the organisation is appropriate, the bot can direct the customer to the relevant place and let them know what is happening and why.

4. Gaining trust from within the organisation

Many businesses struggle to gain support and investment for AI from the rest of their organisation. As a relatively new form of technology, there are still likely to be problems with determining a true ROI, meaning that it's difficult to budget or invest in the unknown costs related to AI projects.

On a basic level, organisations can determine the value of the time spent by employees dealing with customer enquiries by calculating the monthly calls, emails and chats they receive.

In addition to saving time and increasing the productivity of the customer-facing workforce, the potential increase in customer satisfaction can be converted into an increase in return visits, improved customer rating and additional sales.

"Chatbots are one of the clearest concrete examples of how the "AI revolution" is impacting on the business landscape and on the day-to-day lives of millions of consumers worldwide. For any company that has an interest in offering a great customer experience, the potential benefits of enhancing customer satisfaction and responding to customers' needs in a faster and more efficient manner by using chatbots are immense." [xiii]

The opportunities for cost savings and revenue generation are becoming more widely recognised. What's more, as business owners see new technologies being used by competitors, there will be increased pressure to conform, improve and compete.

5. Incorporating AI into team structure

When organisations decide to invest in AI and incorporate this technology into their site, it can then be difficult to determine how to build, test and manage this additional resource.

"When asked about the challenges inherent in using AI and automation to personalize customer interactions, CX teams noted a lack of autonomy over their tools. Over half of respondents indicated that their solutions must be customized by IT teams, leaving business users disconnected from their own tools, and unable to create compelling experiences. Furthermore, 50% also acknowledge that the business users which make up these CX teams do not have a technical background, further feeding into the overreliance on IT." [xiv]

If organisations want to continue to use AI effectively and incorporate its potential into future strategies, it needs to have a permanent and dedicated place within an organisation.

"CHATBOTS ARE STILL HUMAN:COMPUTER INTERFACES. THE EXPERIENCE SHOULD BE DESIGNED".

Introducing new customer experience careers

This new technology offers an opportunity for new roles to develop across AI, personalisation and customer experience. Sitting within the customer experience division, these new roles need to determine how, when and why AI should be used across the customer journey. Market leaders in chatbot software, ADA, have coined the idea of the 'automated customer experience':

"While introducing AI can bring instant engagement across digital channels, to ensure long-term success and ROI, it must be integrated as part of a larger digital strategy. At the same time, AI-powered assistance requires its own plan. That's where the automated customer experience (ACX) department comes into play" [xv]

A dedicated team focusing on automated customer experience can create value from AI by:

- Discovering and testing how it can be used to increase efficiency

- Researching how it can improve customer experience

- Using user-centred feedback to personalise and develop the technology into a more beneficial product

- Monitoring its ROI to ensure budget is in place to include it in future strategies

- Securing a position for AI in the future, keeping the organisation at the forefront of potential technological opportunities

Chatbots will soon power 85% of customer service interactions

Chatbots are one of the clearest concrete examples of how the "AI revolution" is impacting on the business landscape

Conclusion

Gartner predicts that chatbots will soon power 85% of customer service interactions,[xvi] so organisations that want a seamless customer experience will need to incorporate this AI into future strategy.

By embracing the potential benefits of the technology and combining this with user-centred research and personalised customer-focused design, the positives for both businesses and customers will become more visible.

Benefits of personalising customer service interactions[xvii]

- Decreased operational costs

- More productive agents

- Greater visibility into customer needs, expectations and behaviours

- More satisfied customers

- Increased customer engagement

- More loyal customers

- More personalised customer experiences

- Agents who work on tasks that have a greater impact to overall CX

Organisations cannot rely on machine learning alone to improve their AI and create continually positive customer experiences. Without dedicated support and research from a customer-focused team, the true benefits will not always be achieved.

By researching and testing the AI with a user-centred approach during the early stages of digital product design, the final result will be less flawed and offer more visible returns on efficiency and customer experience.

End notes

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