Using Artificial Intelligence-Powered Chatbots to Gain a Competitive Advantage
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Chapter 1: What’s a Chatbot Anyway?</td>
<td>4</td>
</tr>
<tr>
<td>Chapter 2: Why Your Business Needs a Chatbot Now</td>
<td>7</td>
</tr>
<tr>
<td>Chapter 3: Making Chatbot Dreams Chatbot Reality</td>
<td>11</td>
</tr>
<tr>
<td>Conclusion</td>
<td>14</td>
</tr>
</tbody>
</table>
Chatbots are everywhere. They go by many names—virtual assistant, virtual agent, or just plain ol’ bot. But no matter what you call it, your business needs one.

By 2020, 85% of customer interactions will be handled by a machine¹ and will be the #1 way for businesses to differentiate themselves from competitors.² Chatbots are the present and future of customer engagement and if your business isn’t on board, trends suggest that your customers may find one that is.

This guide will give you all the information you need to efficiently and effectively plan intelligent chatbots to deliver a personalized experience for your customers, reduce operating costs, and gain a strategic competitive advantage in the latest, greatest tech boom.

Technically speaking, a chatbot is just a computer program that mimics conversation with people using artificial intelligence. The services a chatbot facilitates can be functional or fun, and the bot can be purpose-built to provide a certain action or actions delivered over any major chat product like Facebook™ Messenger, Slack, Kik, and others.

But beyond computer software, chatbots are also the present and future of customer engagement. Chatbots provide a convenient, interactive way to connect with customers where they live—online—and give them a familiar experience similar to conversing with a live agent or employee any time of the day.

Chatbots scale in ways human teams can't, helping you reach customers in ways you couldn't before. Chatbots can significantly extend the reach of your brand and, more importantly, of your support and service teams by creating a 24/7/365 online presence and direct customer engagement across every communications channel. Regardless of industry, customers want to feel taken care of and like their concerns are heard. Chatbots augment existing human staff to fulfill both of those demands efficiently and cost-effectively.

How’d we get here?:
A brief history of the chatbot

While chatbots are all the rage today, they're not necessarily new. Today’s AI-powered bots have a long, storied history rooted in curiosity, exploration, and innovation. The next page holds some key milestones.
THE HISTORY OF THE CHATBOT

Alan Turing publishes Computing Machinery and Intelligence, in which he tried to determine if a machine could win what he called “The Imitation Game,” resulting in the famed Turing Test.

1950

Joseph Weizenbaum publishes ELIZA, a program for mimicking human conversation. ELIZA works by parsing the words that users enter into a computer and then matches them to a list of possible scripted responses.

1956

Rollo Carpenter creates Jabberwacky, a bot aiming to “simulate natural human chat in an interesting, entertaining, and humorous manner.”

1966

SmarterChild bot is distributed widely across SMS and messaging platforms, featuring personalized conversations and quick data access. Considered the precursor to Apple’s Siri and Samsung’s S Voice.

1988

Richard Wallace develops Artificial Intelligence Markup Language (AIML), forming the foundation for Artificial Linguistic Internet Computer Entity* (A.L.I.C.E.).

1994

IBM introduces Watson, designed specifically to take on human contestants on the game show Jeopardy! using Natural Language Processing (NLP).

2001

Apple creates Siri, an intelligent personal assistant featuring a natural language UI to answer voice commands and perform Internet service requests.

2006

Facebook allows developers to create interactive bots on the Facebook Messenger platform. Within the first two months, more than 10,000 bots were available.

2010

Facebook

2016

IBM

* A.L.I.C.E. was the first open-source bot, allowing developers to add their own responses to the bot’s conversation.
Chatbots in today’s business

Businesses of all stripes can benefit from chatbots. How you use a chatbot is limited largely by your own creativity. Here’s a helpful (though not exhaustive) list of companies in various industries putting chatbots to good use.

1. Entertainment: Ticketmaster’s website chat widget delivers 24/7 online shopping support for customers to simplify and accelerate online purchasing.

2. Retail: H&M’s Kik chatbot offers online shoppers personalized style tips and clothing combinations. It’s also transactional, so customers can use it to complete a purchase.

3. Hospitality/Travel: Dutch airline KLM built a chatbot that uses Facebook Messenger to send passengers booking confirmations, flight notifications, and even their boarding passes.

4. Finance: Bitcoin marketplace Xapo has a chatbot that helps educate consumers about the Bitcoin industry and answer specific questions about a customer’s account, purchases, or how to execute a trade.

5. Consumer Banking: Kasisto’s MyKai chatbot uses popular messaging apps like Facebook Messenger and Slack to provide banking customers a simpler way of watching their money—or even moving it.

6. Food Service: Taco Bell’s Tacobot allows customers to peruse the restaurant’s menu and place an order for pickup at any location using Slack.
Modern businesses require modern solutions

Today’s business environment is unlike any we’ve seen before and technologies like chatbots are essential to remaining competitive. Customers are savvier, prefer social media and mobile platforms for communication, and demand an intuitive and seamless customer experience.

As the number of channels and customer touchpoints multiply, customer expectations continue to evolve toward tailored, integrated interactions and immediate answers to their questions. As a result, businesses across industries, verticals, and geographies are increasingly challenged to replicate a personalized, responsive experience over multiple channels—and demand isn’t slowing down.

More than 85% of consumers have used an online channel—text, live chat, email, etc.—for help on a product or service and over 40% do so expecting a response within an hour. Adding to the challenge is the fact that 60% of consumers change their contact channel depending on where they are and what they’re doing, requiring businesses to be more agile and flexible in their customer communications.

---

But, staffing live agents to meet those demands is unscalable and untenable for even the largest organizations, necessitating other, more automated solutions to help manage growing volumes of support tickets and tight timelines. In response, businesses need to be able to mobilize their knowledge bases, making information easier to find or acquire for customers, regardless of device or channel.

However, most organizations have information—customer account histories, product specs, and other essential data—scattered among various systems and platforms. Mobilizing it and making it readily available anytime, to anyone on virtually any channel is one of the biggest obstacles standing between businesses and optimized customer support, self-service, and e-commerce operations.

Customers Are Constantly Expecting More

Increasing volumes of support tickets requires more manpower. While customers expect more, customer service teams are challenged with providing smarter, faster service and self-service solutions to meet the evolving expectations of today’s customers.

40% of customers can’t find information online on their own about a product or service. (Salesforce)

90% of consumers now expect a brand or organization to offer a self-service customer support portal. (Microsoft)

An estimated $41 billion is lost by U.S. companies alone each year due to poor customer service. (NewVoiceMedia)

Approximately 80% of current contact center customer service systems won’t meet the future needs of the business. (Dimension Data)
Lost Sales & Abandoned Shopping Carts

Businesses need resources to recapture lost opportunities from shopping cart abandonments.

- Approximately $4 trillion worth of merchandise will be abandoned in online shopping carts this year, and about 63% of that is potentially recoverable by savvy online retailers, according to BI Intelligence estimates. (Business Insider)

- Shopping cart abandonment is increasing and it will continue to do so as more consumers shift to online and mobile shopping. In 2013, as many as 74% of online shopping carts were abandoned by shoppers, according to data shared with BI Intelligence by e-commerce data company, Barilliance. That abandonment rate is up from 72% in 2012, and 69% in 2011. (Business Insider)

- 68.63% – average documented online shopping cart abandonment rate (Baymard Institute)

Chatbots for the Modern Enterprise

Organizations challenged to balance the evolving expectations of their customers and the reality of staffing up to meet them are increasingly looking for alternative options.

Chatbots won't fully replace live, human agents, but when built with the right backend—a robust knowledge base, Natural Language Processing (NLP) capabilities to understand meaning within complete sentences, and real-time analytics—they can help offload some of the redundant, more time-consuming tasks live support teams face each day.

Example of Ticketmaster’s Chatbot
Intelligent chatbots can support a business at two levels: search and transaction execution.

At the search level, chatbots should take advantage of semantic search technologies to help customers locate relevant information faster based on what their searches mean, rather than by which keywords they type or say.

However, the value of chatbots in an increasingly self-service-oriented landscape is that well-designed bots can go beyond just semantic search and actually execute simple transactions like resetting passwords, requesting time off at work, booking airfare, or ordering a pizza—all without human intervention.

“Customers ask us a lot of questions about our product and the industry as a whole. They want a one-to-one experience that makes them feel like they’re being heard. An intelligent chatbot is the only way to create that experience without having to break the bank and add entire teams of live support agents.”

- Jessie Blocker, Lead Customer Support, Xapo
Selling AI to Your Team

Even with all the reasons and stats that compel companies to explore chatbots for their businesses, getting organization buy-in is often the last (and often greatest) obstacle.

Building, deploying, and maintaining chatbots costs time, money, and requires a concerted effort from across your organization.

Here are five ways you can get key decision makers or influencers in your company to get on board with the idea to make your chatbot strategy a success:

1. Get smart: Overcome preconceived ideas about AI with a little research and education. Chatbots don't work through some voodoo magic. Familiarizing your team with concepts like Natural Language Processing, Knowledge base/FAQ optimization, and customer self-service (ticket deflection, search-to-cart ratios, etc.) will go a long way toward separating fact from fiction and easing any concerns your team may have chatbots.

2. Compile a list of vendors and technology partners. If you really want to impress the boss and colleagues, make sure to pick reputable and truly innovative partners. Obviously, you’ll want to seek out companies with track records of success and working with well-known brands credibility. But you should also aim to find vendors whose technologies are flexible and can demonstrate an array of use cases across industries, verticals, and applications.

3. Schedule a live demo and ask for live customer examples: Most live demos are going to be on dummy accounts. Don’t hesitate to ask for live examples of current customer deployments so you can see in real-time how other businesses are applying the technology and to get a feel for how your customers’ experience may benefit from you doing the same.
Ask a lot of questions: Many technology partners expect you to ask questions, but expect you’ll keep it fairly high-level about the current features and benefits of their product. Take a deeper dive and really probe for capabilities or functionality that uniquely fit the demands of your business, such as machine learning vs. assisted learning capabilities or multi-language adaptability.

Imagine the potential: In addition to talking about what chatbot technologies can do now, imagine what they might accomplish in the future. Ask vendors to brainstorm with you a variety of scenarios—from plausible to pie-in-the-sky—relevant to your business and your customers.

Exposing your team to the potential and possibilities of intelligent chatbots may just be the most effective way to sell the benefits to your business and your customers.

That 1-to-1 Experience: Giving your chatbot personality

Building a chatbot is an exciting development for many businesses aiming to capitalize on emerging technologies, enhance the customer experience, and gain a significant competitive advantage. But in order to really make a substantial impact on your business—especially for your customers—your bot must feel like a real person and the interactions completely natural.

Give your chatbot personality by enabling a “chit-chat module,” or free-form conversation capabilities using Artificial Intelligence Markup Language (AIML) and backend web forms to extend the reach and utility of your existing lexicon database. AIML is the foundational language for an intelligent chatbot, enabling natural language processing based on the Meaning-Text Theory (MTT) linguistic modeling to understand meaning in a customer’s ordinary, daily language.
Add to the experience by building an avatar, a visual representation of a virtual agent or chatbot, for greater interactivity. Avatars can be created from scratch, or from a platform with a menu of pre-built avatars to speed up the process. Make your users feel like they’re chatting with someone with personality by adapting your avatar’s mannerisms, appearance, voice tone or accent (if you’re giving it a voice) to better represent your brand and, more importantly, better reflect your audience.

Finally, like all good applications, chatbots should evolve with the needs of your users and your business. Use back office analytics to identify gaps in your knowledge base, evaluate search query trends in real time, and optimize your content for greater relevance and accuracy so your customers can find what they’re looking for without having to exit the buying journey to go to a dedicated support site or portal.

**CHATBOT ESSENTIALS**

**Key Considerations When Building a Chatbot**

+ **Acquire** or develop the appropriate language and coding expertise
+ **Create** a foundation based on Artificial Intelligence and Natural Language Processing so your customers are understood by your chatbot
+ **Enable** entity detection to locate, identify, categorize, and analyze keywords and phrases in a customer conversation
+ **Create** chatbots that can handle transactions such as password resets, balance transfers of online reservations.
+ **Connect** bots seamlessly with the entire business ecosystem—CRM, ERP, CMS, and other essential applications
+ **Be transactional** across web, mobile, and social channels
+ **Leave it to the experts.** Save tons of valuable time by working with a solution partner that has years of experience.
Chatbots Are Worth the Investment

By 2021, there will be an estimated 1.8 billion unique, active consumer chatbot or virtual assistant users. Companies large and small, in all industries and markets, should consider getting ahead of the curve and embrace chatbot technologies now to capitalize on future opportunities.6

Sure, building a chatbot means investing in the technology buildout, maximizing integrations to various enterprise systems, and designing an engaging, interactive interface. All of those things can cost time and money that many organizations feel they don’t have.

But an investment now means greater returns well into the future. The manner in which your business uses a chatbot will be limited only by your own creativity. And with chatbots and digital virtual assistants poised to bring in more than $600 billion in revenues by 2020 across a variety of business functions, there are few businesses that can afford to wait.7

For more information about building intelligent chatbots for any kind of business—especially yours—visit www.inbenta.com.