Lucidworks

Beyond Chatbots: Conversational Apps and the Future of Customer Experience

Hurried & Harried

There's simply no time. Nobody has any time for anything anymore.

Sure, we've always been "busy-busy", but in a world of churning uncertainty and roiling chaos, we just simply want to get things done. We want to get our jobs done. Get our errands done. Get to the point. And move on with our lives. And with our business.

Customers don't want to stumble around an overgrown customer portal or bleed their patience into a phone support queue. Employees don't want to wander aimlessly through network drives and fileshares searching for the information crucial for doing their jobs.

They just want answers.

Why can't I just say what I want and then get it?!

That's where conversational apps come in.

Conversational applications use human dialogue as their interface. I type or tap or say aloud what I want to know, and the system comes back with exactly what I'm looking for. Conversational applications grew out of computer science in the 1960s, aiming to create what were then called "question answering systems." QA systems used natural language—plain English instead of arcane system commands—to ask and answer questions from a predefined knowledgebase The key was to allow users to ask questions in different ways while providing the same answers they would receive from whomever curates that information.

The most popular implementations of conversational applications have been **chatbots** that simulate a text chat or spoken conversation to understand and then answer questions. **Virtual assistants** (or simply "VAs") are another popular type of conversational app. While chatbots are usually used for learning information *about* things, VAs are more focused on *doing* things. These might include workflows like managing a task list, scheduling meetings, taking notes, and so on. Both simulate the give and take of human conversation to make things happen.

On the backend, conversational apps put machine learning to work to make sense of large data sets like knowledgebases, FAQs, or support docs to quickly receive a question, understand it, search for an answer in the data set, and then come back with the most relevant answer. Conversational apps use many of the same practices and algorithms that help people search online shops or their network drives at work.

This buyer's guide will walk you through the key features to consider when choosing a platform for your chatbots and other conversational apps. Whether you're new to the world of conversational applications or have already dabbled in the basic features of these solutions, you'll learn the must-have functionality that is core to any conversational application.

Why Everyone Hates Your Chatbot (Including You)

You're in the board room:

> *"Next slide. And how's our chatbot strategy? Where are we with that?"*

Everyone in the board room turns to you.

You've already tried some off-the-shelf chatbot apps. And they were… okay. They're basically what would happen if a contact form hooked up with a Choose Your Own Adventure book. You set up a dialogue tree of if-that/then-this flows to get the user to schedule a demo with sales, get them to the right product page, or shuffle them into your support portal.

> *"Numbers are… good,"* you respond.

Numbers are okay. There's been some engagement in the areas of your site where you're popping the chatbot script. Rules-based chatbots are good at completing a narrow set of tasks, and for smaller companies and brands that might be enough. But the execution is still kinda... clunky.

Has anyone loved a chatbot interaction? Like really loved it. Has anyone ever said, "OMG that was amazing service from an impersonal automated system… five stars all around! Wow!" (I'll have what she's having.)

Nobody likes your chatbot. You don't even like your chatbot.

Back to the board room:

> You add, *"Numbers are good and improving, but we still need more data."* Pause.
>
> *"Okay. Next slide. Now let's look at retention."*
> You're off the hook. For now.

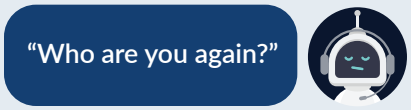
Chatbots were supposed to revolutionize everything. From the shopping experience to customer service to making your IT or HR helpdesk more efficient. And with the global move towards full-time remote work, you can't just walk down the row of cubicles to get help or interrupt the IT team a few floors down.

But still: We hate our chatbots, for two main reasons.

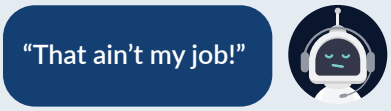
Terrible Experiences

Conversational apps should feel magical. You say what you want to know in plain language and the system responds instantly with the right answer (also in plain language). But first-gen conversational apps are about as user friendly as a root canal.

You shouldn't have to play a guessing game trying to say the right combination of words in the right order to get the right answer. The system should understand your intent instead of you having to phrase your question in an excruciatingly specific way.



Chatbots should know who you are. If you're a customer: your location, past purchases, previous support tickets, shopping history, and other behavior. If you're an employee: your job role, business unit, or most important projects. If you make your users start every chat like they're a complete stranger, you're going to annoy the heck out of them.



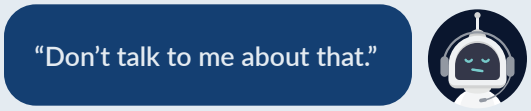
The first generation of conversational apps executed rule-based workflows that worked only as long as you stayed within the rigid, pre-defined decision trees. Conversational apps should be smart enough to use AI to find the answer, and deliver it in the most appropriate context.

Even further, these interactions should be consistent across all channels: web, mobile app, in-store, or on the phone. No matter where I am or where I've been, the system must pick up right where I left off.

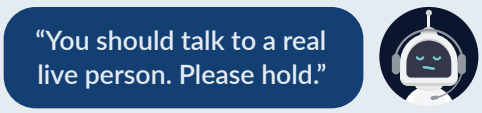
Terrible Answers

Conversational systems should just know what I mean and tell me what I want to know.

Like the rigid workflows above, if a chatbot can't recognize synonyms and other parts of speech in queries or questions, it can't get you to the right answer. When an app can't ask follow-up questions, it can't sharpen and tighten the query to give better answers and deliver them in plain language.



Further, if an app can't build its own knowledge graph beyond the initial, canned question-answer pairs, it's going to keep missing the mark. Interactions should feel like talking with a real agent or advisor. Conversational apps should be applied to content beyond simple FAQs and support docs. Your users want to chat about CRM notes, marketing copy, and social media and myriad other tidbits scattered across your other internal systems and databases. Why fence in your users, based on where the data sits?



And when all else fails and the answers can't even be found inside the domain of the app, you throw them into a phone or chat queue with a live operator. And your support employees should be able to see the case history for the ticket. Shared knowledge puts your employees on the same page as your customers.

How Conversational Applications Are Changing Business

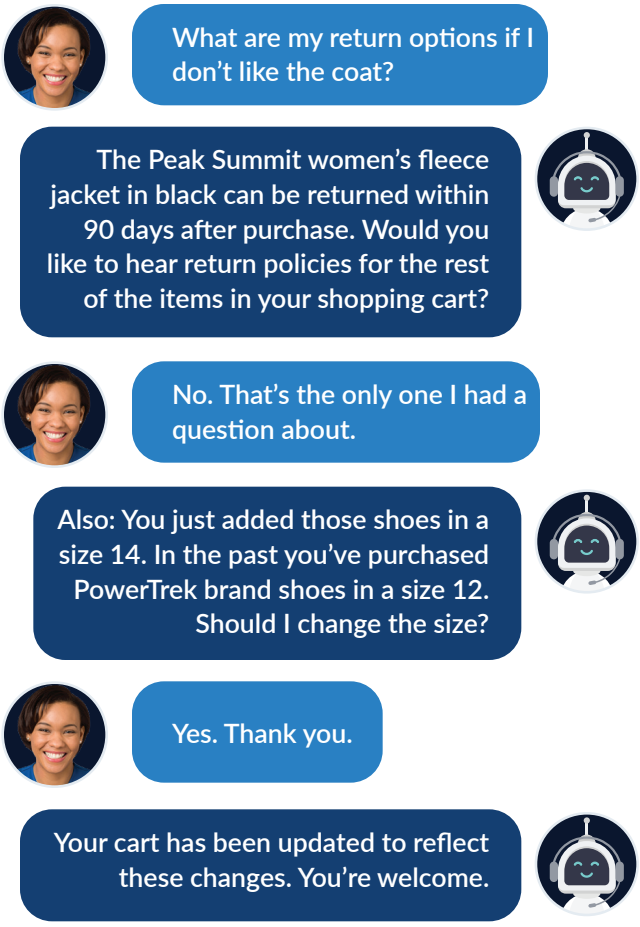
When chatbots and other conversational apps hit the mark, it can be transformative. Let's examine how these technologies can cast their spell both inside and outside your organization:

Across the Customer Journey

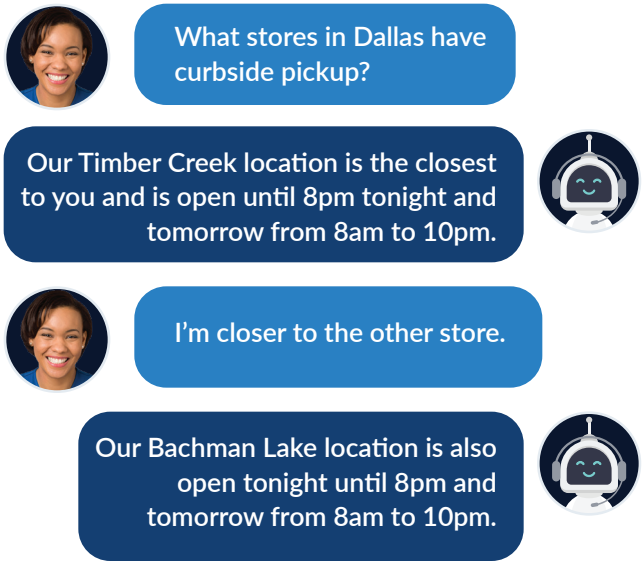
Conversational applications can guide your customer's journey from browse to search to sale to service.

Before the sale, a well-tuned app can answer a customer's questions as they browse your site or shop online. This helps them hack through the usual thicket of long product descriptions and documentation. They can ask questions and get instant answers right inside the browser or your app and even ask follow-up questions. Easier product discovery encourages shoppers to add more items to their cart. Chat experiences can also be used as part of marketing campaigns and interactions before the customer even gets to your site.

At the point of sale, the app can answer questions and ease any worry the customer may have about completing the purchase. This confidence boosts conversion rates. And the system is smart enough to interpret a particular customer's question within the context of this order or past purchases:



Post-sale customer service and support is the final (and usually longest) stage in the customer journey. A conversational app can really shine here. Customers are able to resolve issues faster using self-service methods, reducing the need for intervention from a human agent. Call deflection goes up and call volume goes down. Agent effectiveness measures start to improve as the system helps customers self-resolve. Chat apps can also be used to triage issues and collect necessary information before passing them to a live agent's queue.



As customer interactions run from site to store to app and back, the experience needs to feel seamless and you need to meet the customer where they are, in the channel of their choice.

Anchoring conversational apps throughout the customer journey can yield huge returns, including: increased conversions, increased call deflection, optimized contact center costs, as well as increased customer engagement metrics and customer satisfaction scores.

Inside the Organization

In addition to customer-facing conversational apps these same technologies and approaches can be brought inside an organization and put to work helping employees.

A **company's IT helpdesk function** can see the same improvements and efficiencies that customers see, just from the inside. Applications can help employees navigate internal tech support portals to self-serve and answer questions about their hardware and software without having to open a new ticket with IT. Routine end user issues get solved faster, IT works on higher value tickets, and agent queues don't get so clogged.

As customized applications for different roles and use cases start to blossom from these initial efforts, and more parts of the business put conversational apps to work, the platform's ROI increases. An **HR hotline and portal** can be streamlined with chatbots to answer questions about PTO policies or travel expenses. Or customer-facing advisors can use a **sales support agent** to quickly search repositories of FAQs and to help customers better understand products and services.

Inside and Outside and All Around

No matter where you start bringing conversational apps into your organization, early success will get attention. At some point, how you set up the conversational flow will influence how well employees can use it to serve customers. For example, when a contact center automates the way it responds to calls from field service representatives who are researching the best options for customer problems, it can provide that same knowledge asset to employees in the back office to repair defects or design new products.

We've all heard the old platitude that the goal of service should be to minimize the distance between your company's employees and the customers that they are here to help. When those two parties use the same conversational app, they can quite literally "speak the same language." Winning organizations treat their employees like customers and their customers like employees, so give them the same framework to solve problems together.

4 Critical Features for Your Next Conversational App

When you're shopping around for a platform that will power your next (or first!) conversational app, there's a whole raft of essential features and capabilities to add to your shopping list—along with some more advanced features that you might not consider in the early stages.

Top 4 Standard Features

As chatbot technology has matured, most vendors offer a standard feature set:

Integration with existing systems like CRM, marketing, and customer support systems, so activity can be tracked across the organization.

Pre-trained models so an app readily understands terminology and concepts specific to a particular brand or industry.

Quick deployment with a bit of code so the question-answering system can be used on a website, in an app, in a shopping cart, or on a customer support portal.

Rules-based flows for common questions and tasks that use decision trees to route inquiries to the right parts of the company.

The Case for Middleware

As more business units inside an organization experiment with conversational apps, teams bring in their own vendors. After a while, CTOs will notice that the functionality of many of these vendors overlap. Most organizations will want to standardize on a common platform for app development across the company for faster, more efficient solution creation. These middleware platforms that sit between the end user interface and the backend documents minimize disruption to existing systems while making them more intelligent, useful and valuable. Middleware allows teams to reuse code and workflows for deeper orchestration between conversational applications and the other parts of the tech stack. Most organizations have already made careful decisions about front-end UI frameworks and backend systems. A middleware platform approach keeps those decisions intact, helping everyone get the most out of existing investments and share the value of conversational applications.

Don't Forget: The Cold Start Problem

You've deployed your chabot or conversational app to production. But it's never answered real questions from real users before. It doesn't have any behavioral data to go on. It's like someone walking up to you on the street, demanding to know, "What's my favorite ice cream flavor?!" You can't even begin to answer that question since you don't even know anything about them.

This is called the cold start problem. When systems are built to feel knowledgeable as they answer questions or make recommendations, they need knowledge. Deep learning capabilities will help the system learn, but that takes time. On day one, the app won't have enough information about the user to make relevant recommendations. You risk a bad experience and the app falling on its face out of the gate.

One way to minimize this "sprint to wisdom" without ready-to-go FAQs is to train the bot on publicly available content related to the areas where you want it to sound competent. There will always be some question-and-answer pairs that can be surfaced to VAs or chatbots to help them jump-start their learning. When there is no existing content to surface question and answer pairs, online datasets can be used as a base for training AI models. As users interact with the system, AI models self-educate to provide the most relevant answers.

Be sure your conversational apps vendor has a well-thought-out approach on how to avoid the cold start problem so that you can launch.

The Top 5 Critical Features

Along with the ability to sidestep the cold start problem and the standard, commodified features listed above, there are five advanced features that you'll want to prioritize as you shop for a conversational app platform:

Robust ML and deep learning capabilities are a requirement for building beyond the traditional chatbot interface and enabling your application to understand natural human language. Prebuilt ML models for semantic search use mathematical logic to match the similarity of a question–which can be asked in many different ways–to the most relevant answer. These, and other out-of-the-box ML models, help interpret user intent so the app can provide helpful answers with or without existing FAQ data. This speeds up time-to-value by delivering more relevant, personalized answers to user questions.

APIs and standard integrations are also crucial for connecting to existing systems: chatbots, virtual assistants, voice services, and knowledge bases. An SDK for connecting to any data source ensures that your team can incorporate all relevant knowledge base content into your application. And a pluggable framework for AI enables you to import your custom ML models into the platform.

An operational pipeline architecture enables machine learning algorithms to be applied to data and documents when they come in, to understand what they contain. Then AI is applied again when the user asks the question, to predict the intent of the question and match it to the best answer. Deep learning watches those data-to-question-to-response feedback loops to continuously optimize results and improve the overall experience.

A low-code user interface ensures that it isn't only advanced engineers and data scientists that can train, tune, and implement ML models. Admins and business owners should also be able to look under the hood so they can know when the system needs better data or fine tuning by the experts who understand the business (this is usually called "explainable AI"). By making machine learning an everyday part of your tech stack you'll see faster time-to-value and self-service model training.

Get Started or Learn More

Customers want fast answers to their product and support questions. Employees want instant answers to their HR and IT questions. Smart Answers on Lucidworks Fusion improves intelligence of conversational applications using search and deep learning to give users immediate, relevant, and contextual answers to their natural language questions.

But don't take our word for it - listen to our customers:

Red Hat

"We conducted an A/B test where we introduced a self-solve based homepage to some customers. There was an increase in traffic that confirmed that customers are really motivated to self-solve and we saw a 7% decrease in support case creation for customers who were given the self-solve homepage."

— Manikandan Sivanesan, Principal Software Engineer, Red Hat

For more information about how Lucidworks can help you with your next chatbot or conversational application, contact us today at lucidworks.com/contact.