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Conversation Design:
A Briefing for Business Leaders

What decision-makers need to know about conversational content solutions

What is Conversation Design?

When you're building a new product, you want to make the learning curve as short and streamlined as possible: ideally, a new user would be able to pick up your product and use it intuitively, without any education, onboarding, or special training.

That's where conversation design, or CxD, comes in. Nobody needs to learn how to have a conversation: you just start talking. By emulating the processes of ordinary human conversations, UX designers can make their software incredibly easy to use, build trust with users, and deliver far richer and more compelling services[1].

But while the benefits of conversational interfaces are clear and immediate, building truly conversational software and digital services isn't easy[2]. Conversation design requires a deep understanding of complex linguistic research, advanced AI and machine learning tools, and UX design[3].

In this guide, you'll learn more about how to overcome these challenges in order to harness the full power and potential of this groundbreaking technology.

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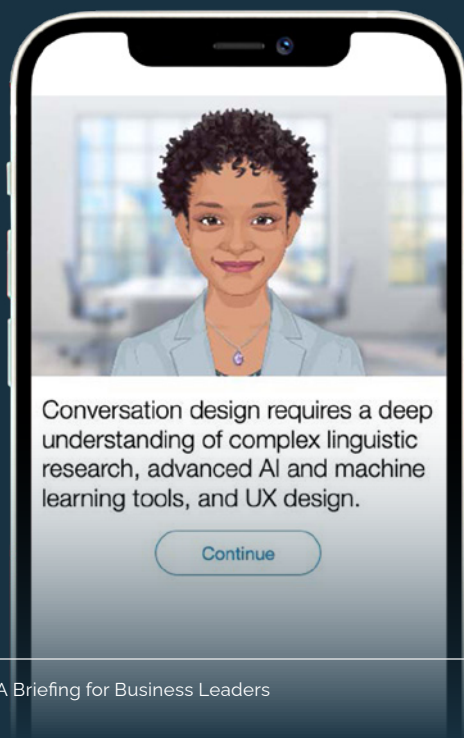
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Look Who's Talking

In 2016, Facebook announced that its Messenger chatbots would revolutionize the way businesses interacted with customers online, and thousands of companies[4] began building their own chatbots. The promised conversation-driven revolution didn't happen, though, with consumers underwhelmed by the reality of digital chat, and even Facebook having to admit that 70% of its bot interactions were actually being guided behind the scenes by human support agents.

Five years later, though, things look very different. Machine learning technology has come a long way, and CxD developers have learned from their earlier missteps to create effective and intuitive chat-based interfaces at scale[5]. As a result, conversational tools are now a big business: Insider Intelligence predicts that by 2024, consumers will spend $142 billion[6] using chatbot-based retail solutions — a huge leap from the $2.8 billion spent via CxD interfaces in 2019.

With 54% of Internet users[7] saying they would always choose a chatbot over a human agent if it streamlined their online transactions, and only 18% saying they would always prefer to interact with human agents, CxD is emerging as a must-have capability for organizations of all kinds. Whether you're looking to automate sales support or to deliver mobile-ready, 24/7 assistance in high-stakes settings such as finance and healthcare, conversation design can help you achieve your goals and deliver the services your users demand[8].

The Technology of Conversation

It might seem that conversations are straightforward. After all, everyone talks, and everyone knows the difference between a pleasant chat and an awkward, stilted social interaction. But codifying those intuitions into an effective conversational interface that *feels right* to users is harder than it looks[9].

To start with the basics, conversations require **turn-taking**[10], so your chat-based tool will need to deliver and respond to cues in ways that users anticipate. That can be achieved using simple **behavioral trees** that let users work their way through a sequence of options to get the information they need.

By using clever combinations of logic gates to steer users through the available content, it's possible to use behavioral trees to develop a plausible approximation of a real conversation[11]. Still, the process is necessarily formulaic and heavily structured: users can choose between the options presented to them, but have little scope to steer the course of the conversation in new directions[12].

The reality, as anyone who's gotten stuck in a looping automated phone system knows, is that tree-based systems lack features of real conversations[13]. To take things to the next level, you need **intent-matching tools** that can understand what a user's speech actually means. Get this right, and you can move beyond formulaic scripts, and start having more realistic conversations[14].

54%

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4. CB Insights. Lessons From The Failed Chatbot Revolution — and 7 Industries Where Tech is Making a Comeback.

5. Reeves B, Nass C. The Media Equation: How People Treat Computers, Television and New Media Like Real People and Places. Jan. 2003.

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To achieve this requires sophisticated **Natural Language Processing (NLP)** to extract meaning from a string of words produced by the user. At its simplest, this may involve spotting the use of certain words, and using them to trigger an appropriate response: a user who says the word "forgot" and "password" in close proximity may be looking for help logging into their account, for instance. More sophisticated NLP deployments may also incorporate sentiment analysis, allowing them to match the tone of their response to the user's level of affect and the emotional content of the words they use.

Often, NLP systems rely on AI systems called recurrent neural networks that allow them to learn and improve as they go. By training these systems using real-world data, it's possible to create a bespoke conversational system that responds appropriately to the specific needs of your users, and that's capable of surfacing the kinds of content they're seeking even in novel or unanticipated scenarios.

Finally, a conversation is only as good as the **user experience.** Imagine having a real-world conversation on a noisy, overheated train — it won't be the same as speaking to the same person in a calmer, quieter setting. Smart chat solutions use the right tools at the right time to augment the conversational experience. That can mean using audio interfaces to facilitate engagement, often in conjunction with Automatic Speech Recognition (ASR) technology that turns spoken sounds into text, allowing your NLP system to interpret and respond appropriately to spoken requests.

It's possible to further augment the user experience by adding avatars or other visual tools to make conversations more personable and human. Customization and personalization are also important, which is why chatbots often tailor their offerings to a user's interface preferences, language, and regional regulatory requirements.

From Content to Conversation

Of course, a conversation is only useful if you have something to say. A critical step toward building effective conversational interfaces is figuring out what kind of content you're trying to deliver. One common mistake, for instance, is simply to take your organization's existing content, and overlay a chatbot-style interface. That can lead to a chatbot serving up huge walls of text, with little scope for users to do more than click the "read more" button.

It's important to approach the process of implementing a conversational interface as one of adapting content, not simply one of shunting existing content into a new format. Conversations require a fluid process of interactive turn-taking, with information delivered in short bursts[15]. In some cases you can achieve that by breaking content into smaller pieces. In other situations, though, it may be more appropriate to provide an outbound link to supporting information on a static webpage, to avoid serving up a long block of text in the midst of an otherwise dynamic and fluid conversation.

There's more to "conversationalization" than simply making a block of existing content more digestible, though. It isn't enough to simply break content up into nuggets; you'll also need to rewrite content snippets so that they make sense as part of a smooth process of fluid turn-taking. Written prose and spoken words also use very different tones, registers, and levels of formality, so content needs to be carefully adapted to its new context in order to deliver a smooth conversational experience for the user. Often,

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15.   Kehler A. Coherence, Reference and the Theory of Grammar. 2002.

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you'll also need to create at least some new content that's designed to account for a range of possible user responses; if you only allow a user to take a single path through your content then you're railroading them through a predetermined experience rather than delivering a true conversation.

To deliver content appropriately, it's also vital to make sure you fully understand your users' workflows and needs. The Ask NHS app, for instance, features a symptom checker where users can access information with any of thousands of potential inputs. Using NLP technology, the app figures out which symptom a user is describing; based on that information, it then serves up a series of customized questions that allow it to progressively triage users. Someone who's describing a sniffle might be asked questions to rule out serious ailments, then served up reassuring content on how to take care of themselves; someone whose symptoms are more complex or severe might be automatically escalated for support from a human nurse or physician, or prompted to seek emergency medical attention.

This goes beyond mere content strategy: to get results, you need to start building emotional awareness and empathy into your chat tools. Social niceties such as saying "Thank you for sharing" or "Sorry to hear you're struggling with that" can make a conversation feel more human, encourage users to be more forthcoming, and ensure they have a positive experience when using your tools. Users also respond well to compliments and — as the research of Clifford Nass[16] shows — even a little judicious flattery: validating a user's response with a phrase like "You're doing great!" helps the user feel that they are a valued participant in a real conversation, rather than simply passively clicking through a list of options.

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Better Conversations By Design

When it comes to developing a chat-based solution, it can be tempting to simply set your own software and UX engineers to work. Off-the-shelf AI solutions are growing increasingly capable, and it's certainly possible to piece together a basic CxD solution using in-house talent. An in-house solution might be appropriate if:

1 **Your use-case is extremely narrowly defined,** such as selecting between a handful of predetermined options in order to access content or resources;

2 **There's no prospect of your use-case broadening over time,** and no need for your conversational interface to evolve to meet your organization's changing needs;

3 **There's no need for advanced conversational elements** such as speech recognition or audio/visual enhancements;

4 **You're only deploying your solution in one setting,** such as a website, and are confident you won't need to deploy on alternate platforms now or in the future;

5 **You're willing to shoulder the responsibility of keeping your CxD deployment updated in the future,** and putting systems in place to maintain institutional know-how if your current CxD experts leave your organization.

That's why many organizations let outside partners take the lead when it comes to CxD. With third-party support, you don't need to worry about keeping pace with state-of-the-art CxD innovations, or fret about rebuilding chat solutions that have grown obsolete. You'll also benefit from lessons your CxD partner has learned solving problems for their other clients, so you can avoid having to reinvent the wheel.

Sensely's smart conversational interfaces are designed to work not just on your website, but everywhere that your users require assistance[17]. We offer multichannel capabilities that enable you to bake your conversational tools into your mobile app, your intranet, or third-party communication platforms such as Facebook and Whatsapp. You don't have to waste time reconfiguring your chat tools across multiple platforms — deploy once, and let us take care of the rest.
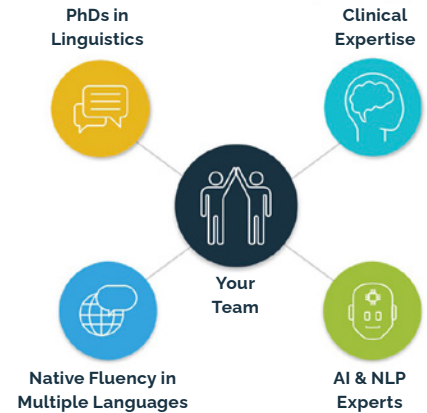
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The Future is Conversational

As the 2016 chatbot "revolution"[18] showed, conversations aren't easy to get right. It takes the right combination of technology, CxD expertise, and domain-specific knowledge to serve up content via conversational interfaces in ways that feel fluid and inviting to users. Fortunately, we've made major advances since 2016: artificial intelligence and NLP technologies are far more sophisticated than they once were, and our understanding of the principles of conversational design — and the needs of users — has also evolved significantly. As we look to the future, it's now clear not just that conversational tools have enormous potential, but also that it's finally becoming possible to achieve that potential. For organizations of all kinds, chat-driven tools and services will only gain momentum in the months and years to come.[19]

Still, it remains far from obvious what a conversation-first world will look like in practice, and there are plenty of problems left to solve as we move forward. That's where Sensely comes in. Working with major institutional and enterprise partners, we've developed some of the world's most sophisticated large-scale conversational tools, and have already started solving the problems that organizations face as they seek to deploy chat technologies at scale. With the incorporation of realistic avatars to humanize digital interactions, our clients are taking conversation design in powerful new directions.

The truth is that while designing one conversation might seem easy, designing a conversational platform that can scale and adapt to an evolving universe of use-cases requires experience and expertise. Sensely brings the depth of expertise — in AI and NLP technologies, in linguistics, and in customer service — that's required to deliver the fluid, powerful tools that consumers expect. Based on our experience, enterprises are increasingly learning how to take new or existing content and abstract it into a powerful conversational tool that feels natural and intuitive for their users.

Partnering with Sensely today ensures your conversational interfaces will be ahead of the curve — and ready for whatever the future brings. So let's get in touch, and start a conversation together.

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PhDs in Linguistics

Clinical Expertise

Your Team

Native Fluency in Multiple Languages

AI & NLP Experts

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ABOUT SENSELY

Sensely's avatar and chatbot-based platforms assist insurance plan members and patients with the insurance services and healthcare resources they need, when they need it. With offices in San Francisco, London, Minsk, and Manila, Sensely's global teams provide virtual assistant solutions to insurance companies, hospital systems, and pharmaceutical clients worldwide.

Learn more at www.sensely.com or email us at info@sensely.com

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