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Chatbot fails:
11 reasons they break and how to fix them.

Plus the ROI you can expect from a fully functioning, fully optimized virtual assistant.

Contents

Too often, chatbots don't deliver quite what you had hoped…

There's no doubt that chatbots and virtual assistants can help your business deliver stand-out self-service experiences.

But it's not as easy as spinning up a basic bot and letting it loose on your customers.

First, you need to know what you want to achieve, what your customers want to achieve, and what each of your engagement channels can do, from messaging, to digital to voice.

Then you need the skills and tools to craft conversational experiences that play to each channel and platform's strengths, sharing customer context and data across channels, while leveraging advanced conversational AI.

You'll also want to understand how to pair your chatbot with human agents. How to make experiences secure, without adding friction. And how to turn your chatbot on a dime, should circumstances change.

There's a lot to consider. And some organizations inevitably miss a couple—or a whole heap—of tricks.

The good news is, you're not one of them. (Or if you are, you won't be for much longer.)

Whether you're about to implement your first virtual assistant, or you're wondering why your existing chatbot isn't working as planned—you're in the right place.

Read on to discover exactly why chatbots and virtual assistants fail, and how to make yours a runaway success.

Why they fail…

In most cases, chatbots fail because organizations haven't fully considered one of these critical areas:

— Their business objectives

— Their customers' needs

— The quality of the conversational AI

— The complexities of human language

— The new tools and skills they will need (internal and external)

— How to handle hard-to-answer questions

— How to escalate to a live chat agent

— Channel strategy across voice, digital and messaging

— Chatbot voice, tone and branding

— Effective fraud prevention

— Continuous learning and optimization

— Ownership of the experience

This list may seem long but neglecting any one of these key considerations can quickly lead to diminished ROI, and an underwhelming chatbot experience.

Reason #1: Human language is hard!

Despite the "chat" in their name, most chatbots aren't great at holding a conversation.

Generally, they're scripted or FAQ-based. So, if a customer asks a question, the bot gives them a menu of preprogramed answers to choose from.

But understanding what a customer really wants—their "intent"—is more complicated than you might expect.

Sometimes, you might want your chatbot to infer meaning based on concepts that have already been introduced to a conversation—just as humans do naturally. So, if a customer follows up a request "Schedule my appointment for this Thursday", with "Actually, change that to this Friday", the bot still understands what it's being asked to do.

The bottom line is, the quality of the AI underpinning your chatbot or virtual assistant (AKA "conversational AI") really matters. It will dramatically affect your customers' experience.

It will also define the type of experiences your chatbot is able to offer; it takes more intelligence to change a customer's reservation for them, than it does to offer up the number of your customer service team.

The Fix: Choose your Conversational AI platform carefully

A virtual assistant powered by more advanced Conversational AI will be better at identifying your customers' intents. That will mean a smoother experience and faster resolutions.

Today's most advanced Natural Language Understanding (NLU) engines are pre-trained on large-scale data sets and deep neural nets, so they're better at identifying words, intents, and conversational "entities".

Nuance virtual assistants can even predict a customer's intent based on their recent activity, including other channels they've already tried to use. This helps ensure a simpler, smoother experience, from the first moments of the interaction.

The ROI
A leading US home improvement retailer partnered with Nuance to deploy a new virtual assistant.

Nuance was able to develop an NLU model that understood 82% of its customers' intents from day one, 87% of their intents by week two, and delivered 100% routing accuracy for cases that required a live agent.

"She never told him that she loved him."

Take the sentence above. It has seven different meanings, depending on which word you emphasize.

You will have read it, and understood it, in one specific way. But just look at all the different ways it can be interpreted, and the context each option could imply:

1. **SHE** never told him that she loved him. → **(But someone else did.)**
2. She **NEVER** told him that she loved him. → **(Zero times in their entire relationship.)**
3. She never **TOLD** him that she loved him. → **(She showed it but never said it out loud.)**
4. She never told **HIM** that she loved him. → **(But told everybody else.)**
5. She never told him that **SHE** loved him. → **(But that someone else did.)**
6. She never told him that she **LOVED** him. → **(Only that she liked him and thought he was funny.)**
7. She never told him that she loved **HIM**. → **(She said she loved someone else.)**

No wonder your chatbot doesn't always understand your customers correctly!

Reason #2: There are gaps in your toolkit and skillset

More businesses are choosing to build their chatbots in-house. If you're one of them, that's great—there are many good reasons to DIY, but there are also a number of pitfalls to avoid.

Most importantly, it takes a village to raise a virtual assistant. Developers, designers, data and speech scientists, testers, business stakeholders… everyone involved in the project needs the tools to collaborate quickly and effectively.

What's more, some absolutely essential skillsets—like conversational design—can be very hard to hire.

Too many DIY vendors don't explain this. They simply throw their APIs over the wall and wish you luck.

The Fix: Understand the task, and source the help you need
First, understand who needs to be involved in your chatbot's software development lifecycle. (The roles we listed above should be a good start.)

All these people should be able to work together easily, with tooling that suits their role, and reflects their level of technical know-how. Right now, cloud platforms are making this kind of collaboration possible.

If you're missing some key skills, look to partner with a virtual assistant vendor that's able to fill the gaps—letting you tap into their expertise, while you maintain leadership of your project, and ownership of your solution. In other words, pick a partner that will let you DIY but not alone.
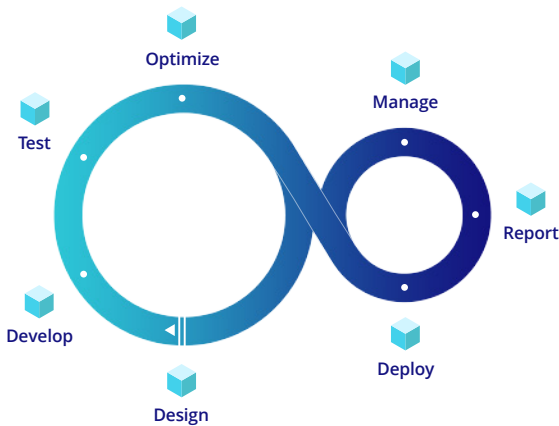
Did you know?
— Nuance has provided industry-leading, user-centric voice and chat UIs for over 25 years

— 85% of Fortune 100 companies trust our core speech and NLU technologies

Reason #3: You implemented your chatbot without a business objective

If you implement a chatbot without a business objective in mind, there's a real chance you'll waste a lot of time and effort.

Worse, you might accidentally create the kind of painful, confusing self-service experience that drives customers away from your brand.

The Fix: Know what your business wants
It sounds incredibly simple. But in the heat of the moment—and in the rush to outshine your competitors—it can be easily forgotten.

So, take the time to define your business objectives, ideally, before you do anything else. (If your chatbot is already up and running, that's OK. Just do it right now.)

Maybe you want your virtual assistant to handle simple customer intents, ultimately reducing calls to your contact center. Maybe you want it to help your human agents delight customers, and maximize sales, by recommending dialog, relevant products, and next best actions.

Some common objectives include:

— Improving customer experience

— Reducing customer service costs

— Streamlining live agent operations

— Supporting sales

— Adding to your business intelligence

— Gathering contact information to generate leads

Your primary objective will shape key aspects of your chatbot's design, not least how advanced its conversational AI needs to be, and what information it needs access to. And, just as important, it will help you and your team recognize success when it arrives.

The chatbot's knowledge
Chatbots are quickly establishing their natural roles in different industries. Retail chatbots, for example, may be designed to engage browsing customers with product recommendations or to help a customer track the status of their recent order.

If your chatbot specializes in doing one, specific thing, make sure this is clear to your customers. Make sure it pops up at the perfect time, and in the perfect place. And make sure it has the right depth of knowledge.

The breadth and depth trade-off

1. Broad but shallow

PRO knows a wide range of information

CON learning conversations takes a long time, and you risk low accuracy

2. Narrow but deep

PRO has a deep knowledge in specific areas

CON only useful for a segment of customers

The ROI
A major global telco deployed a Nuance Virtual Assistant to help it meet demand for service on digital channels. The virtual assistant delivered $14M in annual savings through contact deflection, handling 50% of cases without the help of a live agent.

Reason #4: You've forgotten to listen to (and learn from) your customers

You know when you see a muddy track, veering away from the original path? That track is a user showing us the way they actually wanted to go.

If you don't analyze customer preferences and behaviors before and throughout your virtual assistant implementation, there's a good chance you'll end up with a chatbot that sends customers in the wrong direction.

The Fix: Understand how your customers want to interact

Study your customer analytics, learn how your users want to interact with you—and where their pain points lie. Then decide how your chatbot can meet these needs.

— When will your customer appreciate personalized, data-driven responses? When would they prefer generalized, to-the-point answers?

— Does your customer want a chatbot that responds through text or through voice? (Hint: It could be both.)

— When will your customer always want to talk to a live agent?

Once you've established how your customers want to interact with your brand, let this information—and your business objectives—help you find the best place to initiate the bot within your customer journey.

If your chatbot has a very narrow use, and deep knowledge, such as one designed specifically to support checkout or shipping queries, you won't want to make it available at every stage.

If your chatbot is broad-but-shallow—the kind that's great at routing customers to the right page or the best agent—it's much more likely you'll want it activated at multiple touchpoints.

A quick tip on personalization
Consider how much personalization will feel "right" to your customers.

Someone trying to arrange a loan might find it disconcerting if a chatbot "knows too much" about their finances. A shopper buying a new winter coat, however, is likely to be thrilled to discover it already knows their size and default shipping options.

The ROI
A leading bank deployed a Nuance Virtual Assistant to deliver personalized customer experiences.

Designed to handle over 350 customer questions and answers, it averaged over 30,000 conversations per month in its first three months of deployment, delivering a first contact resolution rate of 78%.

Reason #5: Your chatbot (and your customer) gets stuck in a loop

There are always going to be times when your chatbot can't help your customer. Maybe it doesn't have the expertise, or maybe your customer doesn't know what they should be asking.

To avoid your customer getting stuck in a frustrating cycle of "I'm sorry, I don't understand the question", you need to establish ways to seamlessly move the interaction to a live agent (while keeping context).

The Fix: Design an effective escalation strategy
Here are a few pointers:

— **Chatbot scope:** Make sure your customer knows which questions the chatbot can answer and make it seamless to move to an agent if they have a query outside its scope.

— **Unresolvable issues:** To avoid unnecessary frustration, your chatbot should also know when an issue can't be resolved though escalation; better your bot immediately tells a customer they'll need to visit a store for assistance, than your live agent delivers the news five minutes later.

— **Routing:** Your chatbot should always route customers to the right live agent for their needs—sales chats to the sales team, support chats to the support team. (Or make sure every agent can help with every inquiry.)

— **Agent availability:** Whether you use the chatbot as a routing engine, or your live agents are the chatbot's safety net, always check agent availability before your chatbot transfers the customer. If no agents are available, let the customer know how long they'll be waiting.

— **Context and continuity:** If your chatbot is struggling to comprehend a customer's needs, the whole experience should be transferred to a live agent within the same interface—don't force the customer to repeat their intent, switch channels or start all over again.

— **Prioritization:** If your chatbot interprets the customer's intent as urgent, if the customer seems frustrated, or if your data indicates they're a high-value customer, route the interaction to a live agent immediately. Sentiment analysis can help your chatbot understand if someone is unsatisfied, and quick escalation can prevent causing further annoyance.

It's OK for your virtual assistant to admit defeat. It can be designed to capture the unexpected behavior it's struggled to handle, recover gracefully, and even collect data to improve the experience in the future.

And just as a conversation with your virtual assistant won't always be the right solution for a customer, the channel they've chosen won't always be the best one to resolve their needs.

If someone has called your contact center, but their need would be better served on a messaging channel, your virtual assistant should be able to make that transition seamlessly too. (But only after checking with the customer first!)

The ROI
A leading US insurance provider used the Nuance Digital Engagement Platform to deliver virtual assistant and live chat engagements to its customers.

Within a month of deployment, the virtual assistant was achieving an 85% first contact resolution rate. Once combined with live chat on the same platform, agent conversion rates improved by 23%—and in just one quarter, the two channels delivered over $4.4M in policy sales.

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Reason #6: Your new chatbot is here! But your customers are over there…

Remember when a virtual assistant lived in the corner of your website? Today, it's just as likely to engage your customers through social media, the various messaging apps on their mobile device, a smart speaker, or even your IVR.

If your virtual assistant lives on your homepage, but most of your customers engage with you through your branded app, you could be setting your business up for another chatbot fail.

The Fix: Create a chatbot that can hold conversations on any channel
If you want your virtual assistant to engage customers on multiple channels, it's good to recognize this from day one. You'll want to develop your new conversational experiences on platforms that allow you to:

— Quickly tailor and redeploy the same conversational experiences multiple channels

— Use every channel that will meet your business objectives and customer needs

— Engage in both synchronous and asynchronous messaging

— Take advantage of each channel's native capabilities

Here's a bonus tip. If you're designing a conversational experience for voice and messaging channels, start with voice. It's much easier to adapt a speech-based experience into a text-based one than the other way around.

Did you know?
The Nuance Mix development platform allows organizations to quickly and easily create and maintain their own enterprise-grade conversational experiences. Once created, these advanced experiences can be tailored and shared across IVR, chatbot, messaging, smart speakers, and more.

Reason #7: Your chatbot hasn't mastered the channel or platform

A great conversation over a messaging channel will look very different from a great conversation with a smart speaker. What's more, a great conversational experience on an OS messaging platform might look very different to one on WhatsApp.

The Fix: Understand—and play to—every channel and platform's strengths
When you're deploying a virtual assistant to a new channel or platform, always ask:

— What does an incredible conversation on this channel or platform look like?

— What expectations will customers bring to the conversation?

— What are the channel or platform's strengths?

— What are its unique capabilities, and how can we use them?

If you're competing on customer experience (and these days, who isn't?), this last question is key; if your chatbot, for example, doesn't take advantage of Apple Business Chat's integration with calendars, maps, Siri and Apple Pay, you can be sure a competitor's will.

Some quick tips on other messaging platforms…
WhatsApp, meanwhile, features end-to-end encryption for all messages—so brands can send notifications and customers can respond in the same channel. Its popularity in many regions worldwide, notably LATAM, also makes it a must for any global brand.

On Facebook Messenger, it's easy to share rich multimedia content. This could be the technical support video which explains how to set up their new phone, or a map showing the location of their nearest store.

Google's Business Messages allows customers to message businesses directly from search results. If your business objective involves reducing the workload for your contact center agents, this could be a great opportunity to put your virtual assistant in front of your customer early in their journey.

The ROI
A fast-growing airline brand was experiencing increased customer demand for service over messaging channels.

It launched its existing Nuance Virtual Assistant onto Facebook Messenger—where it assisted more than 8,000 customers in its first eight months alone.

Reason #8: Your chatbot is a bit, well, unremarkable

Chatbots used to be a genuine novelty. Just having one was enough to tempt curious customers into engagement and to make your customer experience something worth shouting about. That moment has passed.

Now, almost every brand has a chatbot. And if your business objectives include winning on customer experience, yours needs to stand out from the crowd.

The Fix: Make your chatbot YOUR chatbot
Too many chatbots sound the same, and meet the same needs, in the same, increasingly unremarkable ways. This is especially noticeable in smart speaker experiences; no matter which business you're talking to, the voice is identical, and the answers all come from a generic playbook.

So, think about your virtual assistant as an extension of your brand. Think about its name, its personality, its voice and tone, and—of course— what genuinely fresh experiences it can deliver. Finally, think about how you can make interactions with your virtual assistant feel consistent across all your engagement channels.

Also, be sure to ask your technology partner for help. If they're anything like us, they see billions of self-service interactions in your industry every year. They may also offer "persona" workshops—bringing your teams together to fine tune your new virtual assistant's identity, sound and feel.

Tips for branding your chatbot

The chatbot's identity: There are some simple ways to establish your chatbot's character:

— Give your chatbot a name

— Decide how your chatbot greets customers

— Get to work with visual branding

Voice and tone: Think about the associations that customers bring to your brand—or the new associations you want to create. A long-established financial institution might decide to build a bot that sounds, above all else, reassuringly professional. A nimble online bank might prefer a bot that speaks more informally, using verbal shorthand and a lighter tone.

The ROI
Nuance worked closely with a major retailer to develop a fresh experience for its shoppers. The brand's customers can now upload a photo of an item, and its Intelligent Virtual Assistant will present similar product options based on machine learning algorithms.

As a team member commented: "Our photo search feature has made it even easier for customers to find what they're looking for. As the first service of its kind, it's been nominated for our yearly innovation award."

Reason #9: Your chatbot isn't helping your fight against fraud

As fraudsters increasingly turn their attention to digital channels, your chatbot mustn't be an easy target.

During the outbreak of the COVID-19 pandemic…

80% of cybercrime attacks were password-related

282% increase in account takeovers

676% spike in phishing attacks

One emerging solution, already well established in consumer electronics and leading IVRs, is biometric authentication.

The Fix: Team your chatbot up with biometric authentication.
You know when you use your face or fingerprint to unlock your phone? That's biometric authentication. It's much more secure than traditional, knowledge-based authentication, and it can take many forms.

For example, imagine a customer has called your contact center, and is talking to your IVR. Voice biometrics can listen to a customer's voice and compare it to a voiceprint you already have on file. If it's a match, the virtual assistant is able to give the customer access to more options, like managing their account.

In digital channels, the key technology is "behavioral" biometrics. Increasingly, everything from the way someone swipes and types, to the way they hold a device can be factored into customer authentication and fraud prevention decisions.

The ROI
A top-tier U.S. wireless retailer is disrupting organized fraud and protecting their customers with Nuance.

In less than three years they've stopped more than 4,000 confirmed fraud attempts, saving an average of $2,000 per event and as much as $3 million per year in averted losses.

Reason #10: Your chatbot isn't learning

As we've seen, spinning up a generic chatbot isn't enough. But the truth is, crafting a super-smart, well designed, strategically deployed, instantly engaging, genuinely jaw-dropping chatbot isn't enough either.

What really matters is what comes next. Unless you analyze and optimize your virtual assistant's ongoing performance, you'll miss hidden customer experience issues and operational efficiency opportunities. Your solution won't learn and evolve, you'll quickly fall behind the times and miss out on lowering costs because customers will escalate to a live agent.

The Fix: Never, ever, stop optimizing
Whether your chatbot is a completely self-contained solution, or it regularly routes and escalates to an agent, monitor its interactions from day one. Look for trends, anomalies, and good learning experiences (for your bots and agents alike).

— **A quick look:** Shortly after deployment, check on your chatbot's performance. Are some customer questions being escalated more often than expected? If so, does the way your bot parses these questions need to be tweaked? Do the answers you're giving need to be rephrased?

— **A deeper dive:** Once you've gathered some more data, go deeper. Should some customer questions really be broken into two? Which questions have direct answers, and where might you want to add a few more questions to clarify the customer's meaning?

— **Learning from agents:** Would it make sense to pair the chatbot with a live agent acting as a coach behind the scenes? (This can be especially useful for a new chatbot.)

— **Supporting your agents:** When your virtual assistant has learned from your best human agents, remember to ask it to return the favor; use it to assist your most inexperienced agents and coach them in best practices.

Remember: measure, measure, and measure again. The efficient automation of customer conversations depends on it.

Continuously evaluate your virtual assistant's performance against key metrics—for example, containment and abandonment—optimize its NLU based on what you find, and make sure it's always learning from your live agents' call and chat transcripts.

Useful metrics
What should you track to optimize your chatbot effectively? Here are four metrics that most businesses will want to keep a careful eye on:

— Your escalation rate. Look at the intents you know your bot can answer, or can help customers to resolve through self-service. How often are they defaulting to a live agent?

— The number of automated contacts, compared to assistance requests across channels, and as a percentage of overall traffic.

— Engagement with your chatbot over time. When does engagement rise and fall, and why?

— Popularity of intents over time—so you're able to track shifting customer needs, and adapt accordingly.

— Your CSAT and NPS scores. Survey your customers and use customer engagement analytics tools to gain qualitative and quantitative insights.

The ROI
A federal government organization was looking to help citizens self-serve, and reduce call volumes during peak periods.

It worked closely with Nuance to develop an Intelligent Virtual Assistant—which engaged in more than 2M conversations within its first 18 months, helped reduce contact center call volumes by 8-10%, and delivered $9.7M in yearly client red tape reduction savings.

Reason #11: Your chatbot can't turn on a dime

When customer needs and behaviors shift unexpectedly, your chatbot can be a powerful ally. Just look at how some businesses successfully repurposed their virtual assistants at the onset of the COVID-19 pandemic.

But if you're entirely reliant on a technology partner to update your chatbot, and they're not incredibly agile, your chatbot can easily become irrelevant overnight. Even in more everyday scenarios, you might find that very simple tweaks take up a lot of time and resources.

The Fix: Own your conversational experiences (or find a partner with lightning-fast reflexes)
If you decide to let an expert partner design and deliver your virtual assistant, think carefully about developing the skills to adapt and update it in-house. That way, when time is of the essence, you won't have to wait on anybody else.

You'll also want to look for a platform that empowers business users to make changes themselves, so you're not constantly asking your technical experts to dive back into the code.

If leaving everything to a partner simply makes more sense for your business, just make sure they're ready to leap into action when you need them the most.
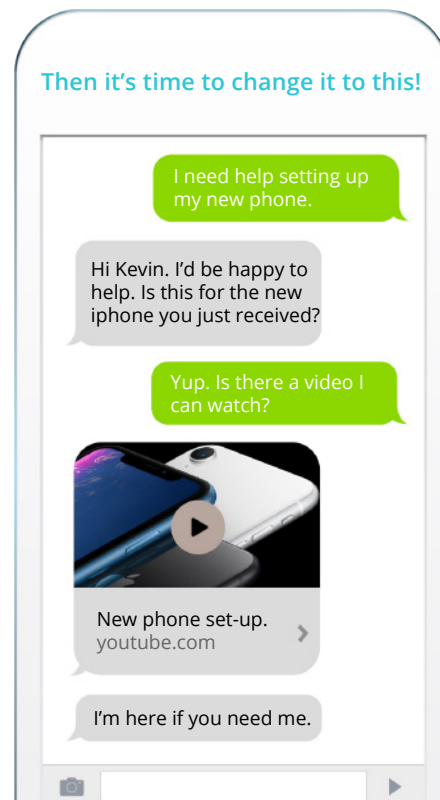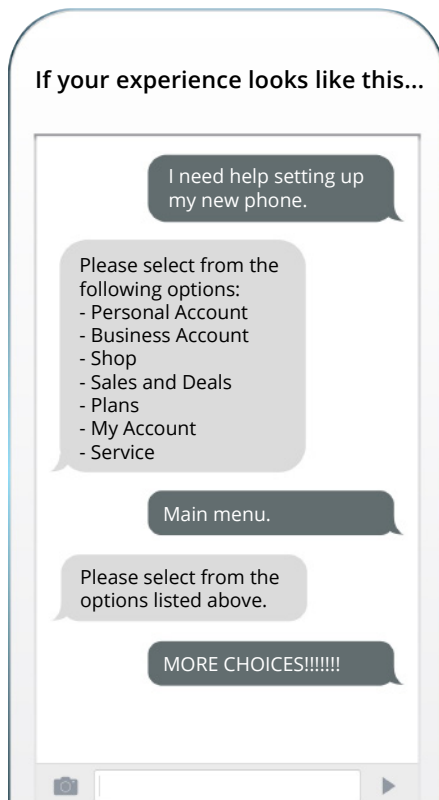
Adapting self-service on the fly
In March 2020, one major financial institution found that customers' COVID-19 related calls weren't being efficiently routed by its IVR—because customers were asking new questions, with new words.

The company took advantage of the flexibility of its IVR solutions, working with Nuance to rapidly update its Natural Language Understanding systems for multiple lines of business, in multiple languages. It was able to update eight systems in just four days.

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If it's broken, let's fix it.

If your experience looks like this...

> I need help setting up my new phone.

Please select from the following options:
- Personal Account
- Business Account
- Shop
- Sales and Deals
- Plans
- My Account
- Service

> Main menu.

Please select from the options listed above.

> MORE CHOICES!!!!!!!

Then it's time to change it to this!

> I need help setting up my new phone.

Hi Kevin. I'd be happy to help. Is this for the new iphone you just received?

> Yup. Is there a video I can watch?

New phone set-up.
youtube.com

I'm here if you need me.

The key takeaways

Here's a quick recap of the key takeaways from this guide.

1. Human language is hard.
So, make sure your virtual assistant's Conversational AI is advanced.

2. It takes a village to raise a chatbot.
So, source all the tools and skills you need, and make collaboration easy.

3. Know exactly what you want to achieve.
Define your chatbot's business objectives early on. (Or right now.)

4. Understand what your customers want.
Look at how customers interact with your brand. Let their behavior inform the chatbot you create and how it's deployed.

5. Establish your escalation strategy.
And make the transition to an agent as seamless as possible.

6. Select your channels carefully.
Then create conversational experiences you can't tailor and redeploy across channels, maximizing your virtual assistant's ROI.

7. Play to every channel and platform's strengths.
This is how you'll ensure your virtual assistant delivers the most impressive conversational experiences around.

8. Make your chatbot an individual.
Give it a personality and voice that make it feel like a natural extension of your brand.

9. Don't let your chatbot be a target for fraud.
Team your virtual assistant up with biometrics technologies to deliver more secure self-service experiences.

10. Measure. Measure. Measure. And optimize.
Your virtual assistant will thrive on ongoing development even more than a professional agent.

11. Be ready to turn your chatbot on a dime.
Whether that means forging a partnership with a highly responsive vendor or taking ownership of evolution and optimization.

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Next steps

Ready to learn more?

Opus Research 2021: Decision Makers' Guide to Enterprise Intelligent Assistants

Find out why Opus Research ranks Nuance ahead of other intelligent assistant and chatbot vendors.

Get the report

The ROI of Digital Customer Engagement eBook

Explore 8 examples of companies winning with virtual assistants and live chat.

Get the ebook

Nuance Digital Engagement Solutions in Action

See how you can deliver personalized, connected experiences across messaging channels.

View the video

WE'RE HERE TO HELP.
If you need advice about your own virtual assistant deployment, or you have a chatbot fail that this guide hasn't provided a fix for, we're here to help.

Get in touch with one of our digital engagement experts at CXexperts@nuance.com.