

Making Everything Easier!™

Synthetix Special Edition

Virtual Agents

FOR
DUMMIES®
A Wiley Brand

Learn to:

- Steer customers toward a Virtual Agent for instant service
- Create an engaging Agent with the right personality and smarts
- Connect your Agent to accurate, personalized knowledge
- Realize what situations should be escalated to a real person

Brought to you by

syntheti 

Steve Kaelble



synthetix

Virtual Agent and Multi-channel Online Customer Service Specialists

Synthetix are known as one of the pioneers of Virtual Agent technology, creating Virtual Agents for companies like the BBC, General Motors, and Ford, comparable to Siri, Cortana and Alexa, before they became the norm. It's true, our NLP technology has answered millions of questions, by making sense of naturally (and sometimes, badly) worded questions.

We believe that customer service across all customer touch-points should be simple, efficient and, above all, consistent, which is why knowledge is at the heart of what we do.

Our technology has assisted in reducing our clients' inbound email and call volumes. In fact, Synthetix clients have reported a first time resolution rate of at least 90%, building strong customer engagement and satisfaction levels.

The Synthetix suite of Self-service Cloud and Contact Centre Cloud technologies integrate with most popular CRM systems (e.g. Salesforce), contact centre platforms, agent desktops and customer service channels.

We have worked with many of the world's best known brands, transforming their online customer experiences, helping to deliver millions of seamless customer interactions across desktop, mobile and social channels.

We hope you enjoy this book.

www.synthetix.com



Virtual Agents

FOR
DUMMIES®
A Wiley Brand

Synthetix Special Edition

By Steve Kaelble

FOR
DUMMIES®
A Wiley Brand

Virtual Agents For Dummies®, Synthetix Special Edition

Published by:

John Wiley & Sons, Ltd.,

The Atrium, Southern Gate Chichester,

West Sussex, www.wiley.com

© 2017 by John Wiley & Sons, Ltd., Chichester, West Sussex

Registered Office

John Wiley & Sons, Ltd., The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ,
United Kingdom

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior written permission of the Publisher. For information about how to apply for permission to reuse the copyright material in this book, please see our website <http://www.wiley.com/go/permissions>.

Trademarks: Wiley, For Dummies, the Dummies Man logo, The Dummies Way, Dummies.com, Making Everything Easier, and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates in the United States and other countries, and may not be used without written permission. All other trademarks are the property of their respective owners. John Wiley & Sons, Ltd., is not associated with any product or vendor mentioned in this book.

LIMIT OF LIABILITY/DISCLAIMER OF WARRANTY: WHILE THE PUBLISHER AND AUTHOR HAVE USED THEIR BEST EFFORTS IN PREPARING THIS BOOK, THEY MAKE NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS OF THIS BOOK AND SPECIFICALLY DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IT IS SOLD ON THE UNDERSTANDING THAT THE PUBLISHER IS NOT ENGAGED IN RENDERING PROFESSIONAL SERVICES AND NEITHER THE PUBLISHER NOR THE AUTHOR SHALL BE LIABLE FOR DAMAGES ARISING HEREFROM. IF PROFESSIONAL ADVICE OR OTHER EXPERT ASSISTANCE IS REQUIRED, THE SERVICES OF A COMPETENT PROFESSIONAL SHOULD BE SOUGHT.

ISBN 978-1-119-40469-9 (pbk); ISBN 978-1-119-40470-5 (ebk)

Printed by Page Bros Ltd., Norwich

10 9 8 7 6 5 4 3 2 1

Introduction



Virtual Agents — customer-service agents that are helpful, courteous, powerful, and completely artificial — are remarkable beings, driven by impressive technology. And though they sound like science fiction, they’ve been around for a while. Synthetix, in fact, has been creating them for clients for a decade and a half now.

Even so, there’s a new buzz every now and then, driven by new talk about developments in artificial intelligence, or sparked by the movement of big players such as Google, IBM, Microsoft, and Facebook into new areas of delivering customer service through artificial intelligence. Text analysis and natural language processing are getting better all the time, and the list of queries that can be answered and tasks resolved without human interaction is growing.

But how smart is smart enough for a Virtual Agent? Is there such a thing as too smart? What’s the difference between a Virtual Agent and a Virtual Assistant? How about a Chatbot? There are so many buzzwords, so much jargon, so much technology, and lots of questions.

About This Book

Virtual Agents For Dummies, Synthetix Special Edition, aims to cut through the digital noise to provide insights that could only come from experts who have been doing this kind of thing for years. It defines what Virtual Agents are, and what they are not, and describes what kinds of characteristics and personality traits make a useful Virtual Agent. It explores the preparations that need to be made in deploying a Virtual Agent, discusses what works and what might cause trouble, and delves into the nature of artificial intelligence (AI) to determine just how much a Virtual Agent needs. It drives home the point that a Virtual Agent is, first and foremost, intended to create exceptional customer service. And it underscores how a Virtual Agent fits into the overall omni-channel customer-service strategy, as one piece in a bigger picture.

Foolish Assumptions

Because you picked up this book, there are a few assumptions we will be making about you, the reader:

- ✓ You're heavily involved in the customer experience, consumer strategy, possibly IT, or maybe you're the CEO!
- ✓ You want to know more about the pros and cons of sharing customer-service tasks with a Virtual Agent.
- ✓ You would benefit, for now, from a relatively basic overview as you head down this exciting path.

Icons Used in This Book

Check out the margins of this book. You see those cute little icons? Here's what each one signifies:



There are thousands of words on these pages, each carefully chosen and placed into a sentence. But if you're in a hurry, be sure you don't miss what's in the paragraph next to this icon.



You want some helpful insights about setting up your Virtual Agent, right? Then don't miss the point in this paragraph.



If you've ever watched a movie about artificial intelligence, you know you've got to be careful to ensure that things don't go awry. These paragraphs offer a helpful caveat to help you avoid a pitfall.



What about Virtual Agents *isn't* high technology? This paragraph has some extra-techie thoughts.

Where to Go From Here

You're going to have to flip the page yourself, as there is not yet a Virtual Agent that can reach out and take care of that for you. But there are many places you can go once you flip that page. We have organized this book to be consumed in whatever way makes sense and meets your needs. Thanks for reading, and good luck in the world of Virtual Agents!

Chapter 1

Meet the Virtual Agent

In This Chapter

- ▶ Defining Virtual Agents
- ▶ Understanding other similar technologies
- ▶ Comprehending the nature of intelligence
- ▶ Gauging the value of Virtual Agents

Back in the day, there weren't that many different ways to make contact with customers or let them contact you — in person, on the phone, by mail, and that was about it. These days, the list of customer-service channels keeps growing all the time.

This chapter focuses on connecting with customers through Virtual Agents. It explains what a Virtual Agent is, why it's useful, how it compares to other digital contact options, and how it taps into artificial intelligence.

What's a Virtual Agent?



Put simply, a *Virtual Agent* is a customer-service agent. It serves the needs of customers by answering questions, taking care of a variety of tasks and transactions, collecting information, and resolving problems. A Virtual Agent's primary mission in life is to create happy, satisfied customers.

But perhaps it's best to begin by talking about what a Virtual Agent is *not*. To begin with, it's not alive. It's not a human being — that's why it's called virtual, and for that matter, why this discussion is using the pronoun "it" rather than "he" or "she."

It's also not intended to totally replace agents who do happen to be human beings. The Virtual Agent supplements the workforce of human agents, working side-by-side and taking on the tasks it handles well, while saving a lot of other tasks for the humans on the team.

And it's also not intended to be absolutely omniscient. That may come as a surprise — isn't making machines more and more and more intelligent the ultimate goal? Not necessarily, when it comes to Virtual Agents. More on that topic elsewhere in this book, but the reality is that it's possible for a Virtual Agent to be too real, too lifelike, too smart.



The bottom line is, a Virtual Agent is a customer-service agent, not a science experiment. The #1 goal is for it to provide the best customer-service experience possible. In that regard, it's different from some other kinds of applications that are also designed to interact, such as other kinds of Chatbots and Virtual Assistants. A Virtual Agent does not need to be good at all things to serve all people — it just needs to be excellent at providing service for your company's customers. An example is shown in Figure 1-1.

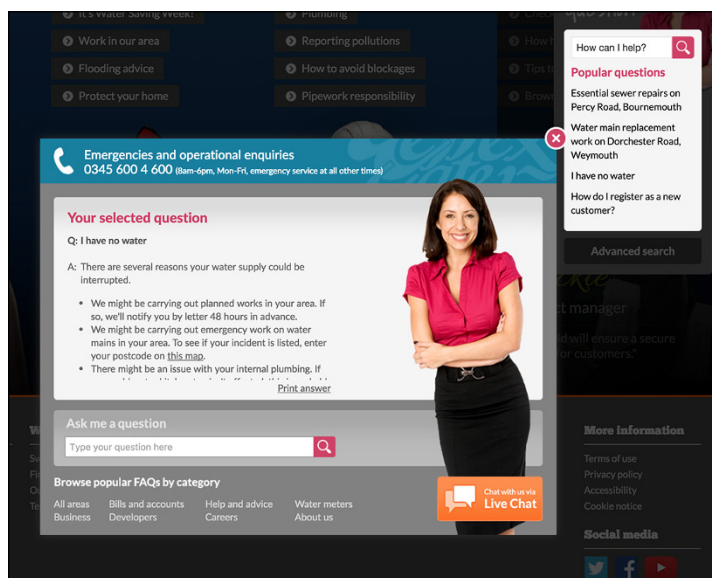


Figure 1-1: Hello! I'm a Virtual Agent.

Bots, Chatbots, and Assistants



A *bot* is a piece of computer software that does some sort of task on its own. There are all kinds of bots, all over the place, doing all kinds of things, both good and bad. For example, bots known as spiders venture out across the web all the time, finding new content to add to search engines. That's a good thing, of course. There are bad bots that also venture out, working to spread malicious code.

Bots are everywhere, making very magical things possible. But don't expect to have a conversation with a basic bot. A search engine spider wouldn't have a clue what you are talking about, and even if a malware bot could talk, you wouldn't want to hear what it has to say. If you're seeking conversation, you might choose to interact with a special kind of bot known as a Chatbot.



A *Chatbot* is a software application designed to emulate humans in conversation. There are other names for Chatbots, such as *Talkbots*, *Chatterbots*, and *Artificial Conversation Entities*. Chatbots engage in conversation through an online chat interface, or through a speech interface. A lot of Chatbots have been created mainly for fun, but an increasing number are being used by businesses that give them access to enterprise systems so that they can serve some of the needs of customers.

The ultimate goal in the creation of a Chatbot is to facilitate conversation so good that the humans on the other end may not know they're talking to a machine. You may have heard of the *Turing Test*. That's a test developed in the 1950s by computer scientist Alan Turing, who wanted to gauge the intelligent behavior of machines.

Passing this test is a remarkable achievement, but it's not necessarily a good indicator that a Chatbot is well-suited for customer-service interaction. Put another way, a Virtual Agent used for customer service is a kind of Chatbot, but not all Chatbots are good Virtual Agents.



Another variation to discuss is the *Personal Virtual Assistant* or *Personal Digital Assistant*. You may have access to one on your smartphone or at home. Siri, found on Apple iPhones, is an example. Google has a variation on Android phones. Alexa is the version put forth by Amazon, and Cortana is a personal assistant from Microsoft.

Virtual Assistants are fun and helpful applications that can track down answers to your questions and perform a variety of tasks on your behalf. They generally work pretty well, too, but most people have also experienced the frustration of being misunderstood by one of these assistants.



If a misunderstanding happens with the Virtual Assistant on your smartphone, you'll be annoyed, but in general, the consequences are minimal. That's not the case with a Virtual Agent providing service for your business's customers. If it misunderstands a customer's query or provides inaccurate information, the consequences for your business could be major.

Virtual Agents are like Virtual Assistants in that both should have interfaces that are friendly, conversational, and personalized. A Virtual Agent, though, is more goal-oriented, designed with specific tasks or queries in mind. In a way, it's like any focused employee with a very specific job description — it's just not flesh and blood.

The Nature of Intelligence

What exactly is intelligence? One dictionary definition calls it “the ability to acquire and apply knowledge and skills.” That's what humans do all the time, not just as schoolchildren or college students, but throughout life.



The annals of science and science fiction are filled with lots of thought about the ways that machines can pursue intelligence, too. This is usually referred to as *artificial intelligence*, and sometimes goes by such terms as *machine learning*, *deep learning*, or *machine intelligence*. And regardless of whether

you're talking science fiction or science fact, you're likely to see it shortened to the initials *AI* (which even made it into the title of a Steven Spielberg sci-fi flick back in 2001).

There are multiple levels of artificial intelligence:

- ✓ **Artificial Narrow Intelligence:** Often abbreviated as ANI, this is AI that's focused on a very specific area. Think of a chess program good enough to take on the world's leading chess masters — that's impressive AI, but such a program would fail at the navigation help you get from your smartphone.
- ✓ **Artificial General Intelligence:** While ANI is sometimes thought of as “weak AI,” AGI is considered “strong AI.” This would refer to a computer application that can do just about any logical task a human can do. We're not really there yet. Even the amazing IBM Watson, which is great at playing “Jeopardy,” gets its power by being able to understand a question and then quickly sift through vast volumes of data to find the answer. Abstract thinking and reasoning don't really compute for Watson just yet.
- ✓ **Artificial Superintelligence:** Consider this description: “an intellect that is much smarter than the best human brains in practically every field, including scientific creativity, general wisdom, and social skills.” That's what an Oxford AI expert named Nick Bostrom had to say about ASI. If we haven't yet achieved AGI, we're certainly a long way from reaching the level of ASI (and a lot of people are somewhat frightened to imagine what it'll be like to get there — there are plenty of sci-fi nightmare scenarios out there, from “2001” to “The Matrix.”).



For the purposes of creating a Virtual Agent, artificial intelligence is vitally important, but it's not everything. In fact, the customer-service experts at Synthetix have been building Virtual Agents for a decade and a half, and their experience has led them to actually engineer some of the AI out of their systems. Why's that? Because it's really not necessary for a Virtual Agent to pass the Turing Test — the test it must ace every day is customer satisfaction.

Why Use a Virtual Agent?

Virtual Agents are a great way to engage customers. They are, in fact, creating exactly the kind of interaction that an increasing number of customers are seeking.



Customers are reaching out to companies more than ever, but though the volume of contacts is always growing, more and more customers are preferring self-service whenever it's possible. In fact, one global report on “The Self-Service Economy” found that as many as 70 percent of customers now expect there to be a self-service option for handling complaints and questions.

Customers have an expectation that they can access an online self-service FAQ knowledge base — it's pretty much a minimum requirement these days and can be an effective way to prevent simple, common inquiries from escalating to agent-assisted contact channels. An FAQ knowledge base is essentially passive, however. A Virtual Agent, on the other hand, encourages an interaction with natural conversation. You can simply speak or type in a question in the same form you would use when conversing with another person. The Virtual Agent understands the query and knows just where to look for the answer.

By engaging in structured dialog, the Virtual Agent provides an experience that's a lot more akin to what would happen when calling and speaking with a live human. In a way, it's self-service that does not feel as much like self-service. And it's definitely the kind of thing that appeals to the millennial generation. Millennials tend to be pretty particular about service — it needs to be available with minimal clicks. Virtual Agents, when done right, can raise the level of service while reducing the number of clicks.



Customers have been responding very positively to their Virtual Agent experiences. One Synthetix survey found that 85 percent of customers found the experience to be “useful and productive.” When it comes to answering quick queries, a study from myclever found that consumers prefer Virtual Agents over live online chat, social media interaction, apps, web forms, email, and the good old-fashioned telephone.

Many organizations can benefit from the use of Virtual Agents. That said, they may not be a good fit for absolutely every brand. There are a lot of considerations to take into account, from the profile of your customer base, to the kinds of services your organization provides, to the reasons that your customers typically reach out.

For example, Virtual Agents make sense for handling seasonal spikes in inquiries, particularly if your organization is often asked the same question repeatedly. If your live agents aren’t dealing with a lot of repetition, a Virtual Agent might not be the right fit.



Remember, this is not some scary sci-fi film. Virtual Agents are not out to replace human customer-service connections, only to supplement them and free up the humans to handle the kinds of tasks that aren’t well-suited for Virtual Agents. Virtual Agents have been found to reduce contact center inquiries by up to 25 percent, but that also means that there are a lot of queries that still need the human touch.

For more thoughts on the decision-making process for whether a Virtual Agent is right for your organization, check out Figure 1-2.

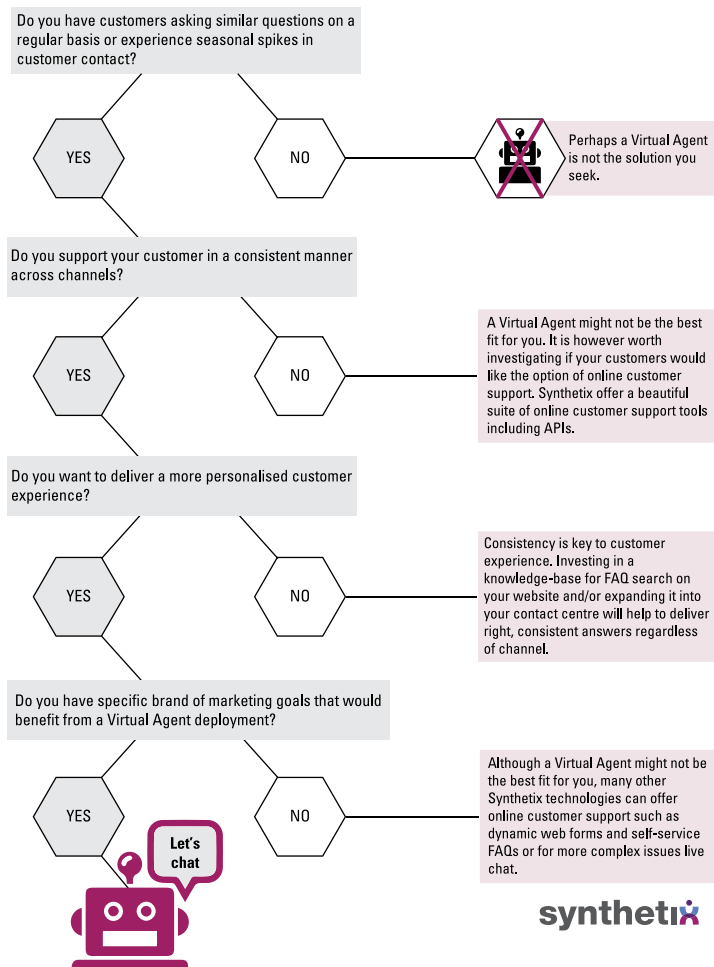


Figure 1-2: To bot, or not to bot?

Chapter 2

The Well-Mannered Virtual Agent

In This Chapter

- ▶ Creating a simple and personalized experience
- ▶ Making great conversation
- ▶ Engaging the customer
- ▶ Sticking to the objectives
- ▶ Understanding where Virtual Agents fit in

What are the attributes of a great Virtual Agent? First and foremost, they just feel natural to the end user. This chapter spells that out in more detail, exploring the simplicity of dealing with a Virtual Agent, the personalized nature of the interaction, and the quality of the conversation. It discusses how Virtual Agents engage the customer, and how they work well with other customer-service channels.

Keeping it Simple

The whole point of creating a conversational, friendly Virtual Agent is to make things simple and engaging for the customer. You want to make it easy and intuitive for customers to find the information they're seeking or take care of the business they want to resolve.



Interacting with your Virtual Agent should be as straightforward as talking to a neighbor. You don't need instructions for that, and interacting with a Virtual Agent should be just as obvious, with no instruction manual.

Making it Personal

Just as your neighbor knows your name, the Virtual Agent should know the name of the customer with whom it's interacting, and plenty of other details about the customer. That personalization makes a big difference in helping the customer feel like he or she is having a real conversation with someone who cares. See the example in Figure 2-1.

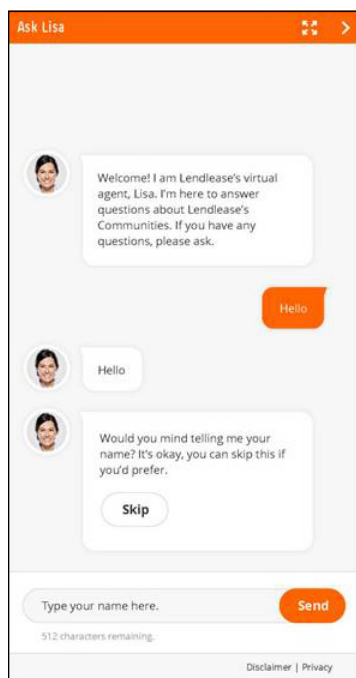


Figure 2-1: The Virtual Agent provides a personalized experience.

What's more, the Virtual Agent needs to have a good memory (perhaps a better memory than your neighbor has). Beyond knowing the customer's name, the Virtual Agent should be able to recall elements of any previous conversations. In particular, the Agent should be aware of goals that were achieved during previous contacts. Again, the customer can feel the care and concern.

Being A Great Conversationalist

If the point is to create a conversation, it needs to be as natural as possible. If you're talking to a friend and ask a fairly simple question, does your friend respond with a lengthy and complicated speech? Probably not, and neither should the Virtual Agent. Whenever possible, the Agent should respond with a single answer, rather than a menu of options from which the user must choose and click.



The Virtual Agent must understand the customer's intent in order to deliver the most effective and helpful answer. Fully grasping the context of the question is the key to success. The Virtual Agent also can be quite adept at using predictive skills — because it understands the intent of the question and the context in which it was asked, it's uncannily good at anticipating the next question.

Engaging the Customer

A great customer experience is the sum total of every interaction with the customer. Plan to use your Virtual Agent to engage your customer early on in a positive way.



A Virtual Agent isn't just for solving customer problems. The possibilities are endless and vary from one business to another. It might answer questions about products before the sale, to help customers make the most appropriate choice. It can help customers understand details about their account. It can do all sorts of things to engage the customer throughout the whole relationship.

Sticking to the Objectives

Interacting with a Virtual Agent can be intriguing and fun. The Agent won't get bored with the conversation, or annoyed, and it can interject humor if it seems appropriate.

But at the end of the day, if the conversation with a Virtual Agent doesn't lead to a great customer experience, what's the point? Any interaction with a Virtual Agent should be goal-driven, designed with the purpose of meeting specific objectives.

Being an Agent for Every Channel

This whole book is about Virtual Agents, but it's important to remember that they're just a part of a much bigger picture. They're not a replacement for your full, omni-channel customer-service experience, but an integral part of it. You should enable virtual conversation over multiple channels, including mobile devices and social media. But you might also need the full range of omni-channel offerings — interconnected customer-service tools that include live chat, email management, social media monitoring, and FAQ web self-service, all tapping into the same expertly maintained knowledge-base. A Virtual Agent should be thought of as a key strategic component of your online customer service strategy, with buy-in from stakeholders at the highest level of your organization.



The Virtual Agent must know when to steer the conversation beyond the realm of self-service. The right Virtual Agent solution can recognize when it's not getting the customer-service job done well enough — in other words, when it's time to escalate an inquiry to a live agent, either through live chat, email, or telephone callback. It should be intelligent enough to know when a handoff is needed, based on the nature and intent of a query, and it should do so as seamlessly as possible. It should be made clear that the customer is being offered escalation from an automated to an agent-assisted channel.

Chapter 3

Picture-Perfect Agents

In This Chapter

- ▶ Writing the Agent's job description
- ▶ Determining just how smart the Agent should be
- ▶ Creating the Agent's visual appearance
- ▶ Formulating a personality

Once you've decided to employ the services of a Virtual Agent, now comes the fun of creating that Agent. This is a task that is part technology, part psychology, and part human resources.

This chapter explores the process of determining exactly what tasks you'll assign to your Virtual Agent, gauging just how much artificial intelligence is the right amount, figuring out what the Agent should look like, and picking a personality profile.

Writing the Right Job Description

Just about any employee of the human variety will perform best when he or she knows what is expected — and when what is expected is reasonable. It's not really all that different in the world of Virtual Agents.



As you design your organization's Virtual Agent, you must carefully consider what tasks you're going to put into its job description. At the very least, your Virtual Agent is likely to be there to answer customers' questions and provide additional information as needed.

Your Virtual Agent will do this in a way that's far more effective than simply posting a list of FAQs, because it will serve up that information through conversation, by processing natural language to understand what the customer wants and delivering only that pertinent information.

For example, a Virtual Agent serving customers of a utility might field a question such as, "How do I reduce my monthly heating bill?" There are a number of possible responses to that, and it may require some additional input from the customer to get to the pertinent answer. It may be that some of the additional information needed to provide a response is already part of a customer's account profile, and a smart Virtual Agent will have access to data that can help yield informed answers.

What else is in the job description? In many cases, interaction with a Virtual Agent may lead to a transaction of some sort. The Agent for a hotel chain might walk the user through the process of finding a hotel, and then move on toward booking. A Virtual Agent might help existing customers add services.

The Virtual Agent might even be tied into troubleshooting processes. A Virtual Agent for a cable television provider might be given the power to send a reset signal to a cable box in order to help resolve a technical difficulty.



The job description has lots of possibilities, depending on the nature of your business and the way your customers would prefer to interact. With some creative thinking, your Virtual Agent should be able to take on at least some of the things that your live agents have done in the past, freeing them up to deal with more complicated needs.

Smart Enough?

Virtual Agents can be incredibly smart, and you should definitely employ them to the full extent of their capabilities. But just how smart should they be? Is it possible for them to be *too* smart? Or perhaps too human?

Believe it or not, yes. One giant, global technology company conducted an intriguing experiment, building an artificial intelligence Chatbot able to speak like a teenage girl. Users could interact with her in the usual ways teens interact, including through Twitter and direct message, and she was programmed to know all about teen pop culture and slang. She was designed to learn from her conversations with real teens, but she apparently hung out with the wrong crowd. Her interactions quickly became more and more vulgar, interlaced with racism and conspiracy theories. Within a day, her behavior was so unpredictable that the tech company (like a vexed parent) had to curtail her Internet privileges by taking her offline.



A good Virtual Agent vendor knows how to train Chatbot technology to avoid such embarrassing situations, knowing when to respond conversationally and when to dial back the intelligence. Firms such as Synthetix build Virtual Agents which employ natural language processing to understand direct, conversational questions and answer with just the right tone of voice, and they've provided millions of answers through the years — whether the questions are well phrased or poorly worded.

Early on, as the company was developing the Virtual Agent technology, it strived to load up Virtual Agents with wide-ranging artificial intelligence attributes and techniques. They had emotions, for example. They could get angry, and even give annoying humans the cold shoulder. An impressive technological accomplishment, one that would make Alan Turing smile, but does that really translate into top-notch customer service? Not necessarily.

So, the company engineered some of that cutting-edge AI back out of the system. Anything that made a Virtual Agent more difficult for a customer to manage was a no-no, even if that meant occasionally giving up the conversational metaphor in favor of some other approach more beneficial to the customer. It was an important lesson, one that Synthetix learned a decade earlier than the technology giant that created the sassy and inappropriate teen Chatbot.

Figuring out the Look of an Agent

A Virtual Agent is just that — virtual. It does not exist in the physical world, which means that it has no physical appearance. Look at that another way, and you realize the Virtual Agent can have whatever physical appearance that you would like.

Why should it have any appearance at all? Why not just make it words on a page? Or perhaps, a computer-generated random voice on the phone?

The answer lies in the power of *anthropomorphism*. That's a long word for the tendency humans have to attribute human characteristics to animals or inanimate objects. It's the concept that made the old "Herbie" movies work — it's not hard to look at a Volkswagen Beetle and imagine that it has a personality. That's anthropomorphism.



When it comes to looking at your computer screen, researchers have found anthropomorphism to be a powerful phenomenon. People, it turns out, tend to spend more time interacting with a Virtual Agent that has a face, compared with interaction involving just a text-only interface. And users were more positive in their responses when they had that face to look at. In essence, they're responding to that Virtual Agent in the same social ways that they would respond to another person.

The reality is, the appearance of a Virtual Agent is a decision that carries more significance than you might imagine. The way a Virtual Agent is presented — its appearance, the quality of its motion, the way users interact with it — can influence the decisions that the user makes.

Like it or not, we all rely on visual stereotypes. Sometimes our stereotypes are innocuous, sometimes unfair, but they do inform our thinking and give us cognitive ideas and shortcuts. We can spend a lot of brainpower considering thoughts and questions about the people we encounter — or, we can make some appearance-based assumptions and then get on with the interaction.

Not only do appearances frame our expectations, they also help us find common references as we interact. Research suggests that our human environments would become overwhelmingly complex to process if we didn't allow ourselves to cruise a bit on autopilot through the use of visual stereotypes.



What does all of this psychology have to do with designing a Virtual Agent? Consider that you're trying to create characters that seem engaging and human, in terms of their appearance and interactivity. It's not easy to get that human-like result through artificial means, such as computer-generated imagery. And you've got to get it right, or else your artificial creation might inadvertently make your human users feel uncomfortable.



It's a phenomenon that's sometimes referred to as the *uncanny valley*, and it can make for intriguing science fiction but nightmarish reality. The idea is that as a robot looks more and more human, those little non-human imperfections and defects get increasingly creepy. That might be a desired effect in a villainous sci-fi character or perhaps an unsavory human character in a video game, but it's not the vibe you want your Virtual Agent to give off.

Crunch the results of all this psychological research and you can get a sense for what a Virtual Agent that would appeal to most audiences ought to look like.



First of all, the research suggests the Virtual Agent should be female, such as the example in Figure 3-1. A female Agent, according to those who study these things, is better at reducing the user's frustration. What's more, female humans have been found to be more at ease when interacting with strangers of the same sex. On the other hand, when men are studied in the Virtual Agent environment, gender does not seem to matter.



How old should the Virtual Agent be? Research suggests that they should be between 30 and 40. That's old enough to be seen as having experience and credibility, but because it's a middle-ground age range, it appeals to a wide audience of people, both younger and older.

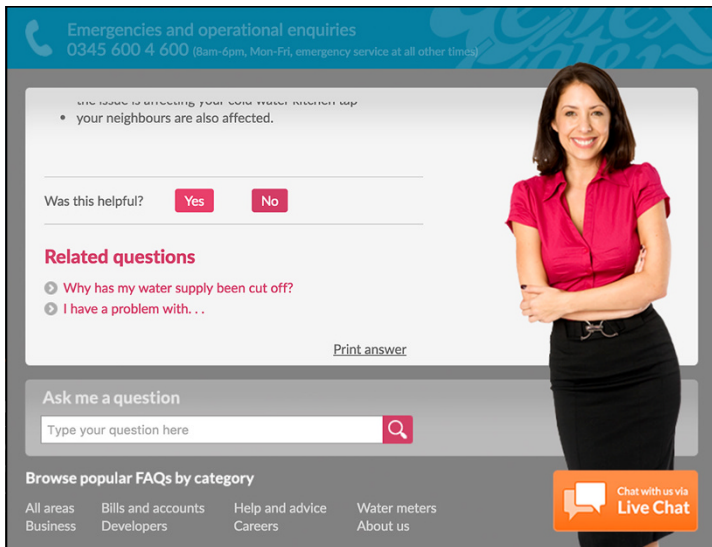


Figure 3-1: Research suggests a female Virtual Agent with dark hair is a good choice.

Another study found that attractive people tend to be more engaging than less attractive people. And generally speaking, females with darker hair color are recommended, due to another visual stereotype that is unfortunate and unfair and inaccurate, but also apparently real in the imaginations of some people: the “dumb blonde.”



Finally, it has been found that actual photos of real humans work best for the appearance of Virtual Agents, rather than computer-generated avatars (see Figure 3-2 and ask yourself whether you would rather interact with the CGI-rendered character or the real person). That’s how you avoid straying into the uncanny valley.



Figure 3-2: Bad versus good Virtual Agent appearance.

Finding a Personality That Fits

So, with regard to appearance, the more realistic-looking the better. What about personality? Should your Virtual Agent have the personality of a live human, too? Should it be charming? Should it pass the Turing Test? Not necessarily. Remember the example of the teen Chatbot that quickly got out of hand as she learned a bit too much from her users. But that's not the only issue.

It is true that Virtual Agents are designed to mimic humans in their ability to learn, as well as their knack for understanding user intent. They're set up to do things that would otherwise require human intelligence, including natural language processing and decision-making.



But there's a difference between these human-like intellectual capabilities and human personality. It's best not to have your Virtual Agent pose as a real human. Automation and artificial intelligence can be great customer-service tools, but remember that their ultimate objective is just that, customer service.

A recent study by myclever bears this out. The study found that the “personality” of a Virtual Agent barely registers with consumers. What they're most interested in is the quality of the customer experience, and whether or not the Virtual Agent made it better. Your Agent's artificial intelligence needs to be smart and effective first, witty and personable second.

Chapter 4

Care and Feeding of Virtual Agents

In This Chapter

- ▶ Building the knowledge-base
 - ▶ Creating a personality and interface
 - ▶ Setting goals for the Agent
 - ▶ Starting the dialog
 - ▶ Tapping into other applications
 - ▶ Connecting with other customer-service channels
-

You're not going to find a competent Virtual Agent inside a box of off-the-shelf software. Needless to say, there's a lot of effort that goes into bringing a Virtual Agent to life and getting it in the loop and in contact with customers. Fortunately, you can easily tap into the expert assistance of people who've been doing this kind of thing for a while.

This chapter explores some of the steps involved in getting up and running, and keeping the operation on-track. It starts with the knowledge-base that provides the truth, and continues through the process of crafting the right personality and interface, setting goals, connecting with other applications, and fitting in with the overall omni-channel customer-service strategy.

Building and Freshening the Knowledge-Base

You can create the most compelling Virtual Agent possible, with an easy-to-use interface and inviting appearance, but if it doesn't have access to great information, it's not going to get the job done. The knowledge-base is at the heart of the Virtual Agent's intellect — not its source of artificial intelligence (AI), but its storehouse of factual information that the customer needs. As shown in Figure 4-1, the knowledge-base is packed with all kinds of useful information to match the customer's needs and situation.

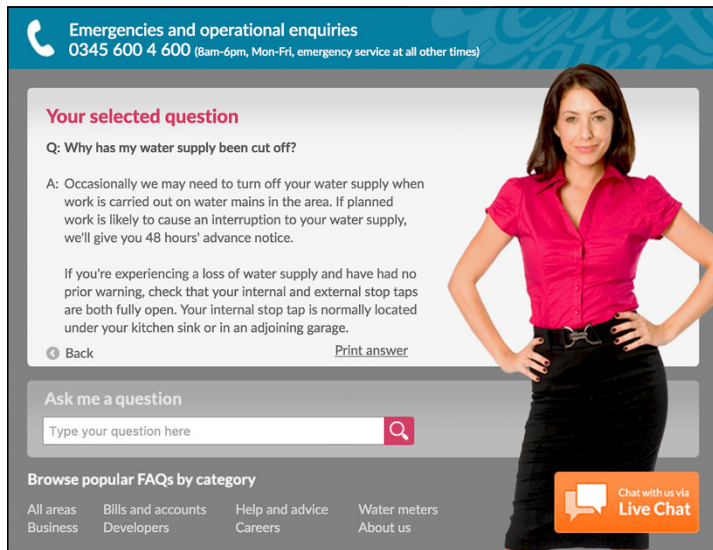


Figure 4-1: Tapping into the knowledge-base.



In fact, one central knowledge-base is the nerve center of your entire omni-channel customer-service operation. It must be complete, accurate, well organized, and always up to date. It's a single source of truth that ensures consistency of information across all channels.

Once the knowledge-base is created, all customer-service channels must be plugged into it. That means those in the contact center who answer the phone, those who handle live chat and email queries, even those working in a retail setting. And, of course, that same knowledge-base is deployed via Virtual Agents. Note that the standard knowledge-base must be specially trained in order to function well as part of a Virtual Agent deployment.

A good Virtual Agent doesn't work alone — it should be able to integrate through API web-hooks with other data sources, if required.

Crafting the Personality

When you think about it, what you're creating not only mimics the human brain in the way it interacts with others, it's organized kind of like the human brain. Different functions happen separately from one another.

For example, long-term storage of information happens in one place — in your brain, that would be in the temporal lobes, more or less above your ears, and in the Virtual Agent that would be in the knowledge-base. The personality function happens elsewhere. In your brain, it's in the frontal lobes. In the Virtual Agent, the layer of conversational intelligence that gives the Agent personality should be kept intentionally separate from the knowledge-base for two reasons:

- ✔ You don't want the analytics which your Virtual Agent will record to include useless chatter — you just want to see how it performs against key goals and what the most popular questions are.
- ✔ You will most likely wish to use your knowledge-base elsewhere in your online customer-service platform, where it will not be delivered through a conversational interface with a personality!

Think of the personality as a conversational layer which augments your Virtual Agent but doesn't get in the way of the core customer-service functions.

Designing an Appealing Interface

As explained in Chapter 3, a Virtual Agent will typically look like a human being. In fact, its online appearance will often be based on a photograph of an actual person.

These days, a live-chat style of dialog works well with most audiences, as the typical online visitor has already had a fair amount of experience with the format. It automatically cues the user into expecting interaction in the form of a dialog, as shown in Figure 4-2.

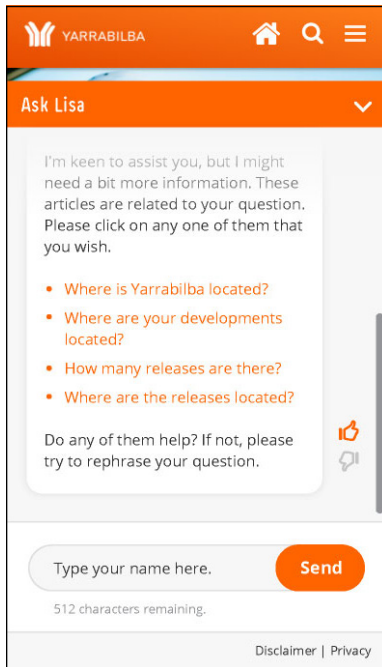


Figure 4-2: Interacting in a chat format.



There's no need for guesswork in this area. Consult with an expert in creating Virtual Agents, such as Synthetix, for guidance regarding the choice of visualization as well as the design of the user interface.

Setting the Agent's Goals

Humans tend to be a whole lot more successful if they're intentional about their goals. Virtual Agents are goal-driven, too, and can be a friendly and engaging guide for users, performing tasks such as qualifying them to better meet their needs, answering their questions, assisting them with filling out forms, interacting with your organization's CRM to create cases, leads or prospects — even leading a customer through a sale!

Virtual Agents developed by Synthetix are designed to pursue a series of goals, which involve promoting and pushing to complete interactive dialogs. The Virtual Agents can also remember goals from one session with a customer to the next, just like a real customer-service agent!

Starting the Dialog

It's worth mentioning once again that Virtual Agents are one piece of a bigger picture, the omni-channel customer-service operation. Your Virtual Agent is designed to enter into a dialog with customers, but in many cases that's just the beginning of the conversation.



The Virtual Agent may find it necessary to hand off the dialog to a live agent. Beyond that, the Virtual Agent can collect information from the customer that can be posted back to the organization or used in a customer relationship management (CRM) system such as Salesforce or Microsoft Dynamics to help facilitate further connections down the road.

Keeping an Eye on the Agent

Once the Virtual Agent has gone live, the knowledge-base needs to be tuned and tailored. You need to ensure that the Virtual Agent keeps the right tone of voice, and that it can select one good answer from your knowledge-base and have a high degree of confidence that it is the *correct* answer, not just the first result.

A standard knowledge-base will not get much use from customers if it is out of date. That's just frustrating. This is true

for a Virtual Agent, too, so just as you continually train and communicate with your contact center agents, keep on top of your Virtual Agent's training by appointing one key person to be responsible for the goals and knowledge content, and liaising with your chosen vendor.

Tapping into Other Applications

There are a lot of reasons a Virtual Agent is a much more advanced choice than, say, a set of online FAQs. Natural conversation is just one of them. A big selling point is the ability to connect with other applications that can help to provide a more personalized and powerful experience for the user.



A Virtual Agent may include seamless application program interface (API) integrations that give it access to third-party data services or back-office systems. You can also achieve text-to-speech integration to give your Virtual Agent a voice. Keep in mind, though, that while speech technology is much better than it used to be, it is still in its infancy and often won't capture the nuance and cadence of real-world dialogue.

Also, the voice options are very unlikely to fit the visualization of your Virtual Agent, especially if you are using a real person as your virtual representative online. Only use voice integration for reasons of accessibility, or if you are building a Virtual Agent without a human-like visualization. For example, Siri, Cortana, and Alexa are all disembodied, so there's no visual discontinuity between the way they look and the way they sound.

Connecting with all the Channels



Not only is the Virtual Agent one piece of the omni-channel strategy, it can also make the other pieces all the more powerful. It's not just sitting alongside the many channels, but often working from within. The Virtual Agent's capabilities can be used via such channels as Facebook Messenger, SMS, and mobile apps, maximizing your investment and ensuring that you can use the technology to service customers via the channel of their choice, not yours. That's all good for the customer experience.

Chapter 5

The Right Technology

In This Chapter

- ▶ Maintaining adequate security
- ▶ Integrating data and knowledge
- ▶ Understanding the complexity
- ▶ Choosing a vendor

Virtual Agents are, of course, children of technology. They live in an artificial world of silicon and circuits, and they reach into the realm of humanity through technological interfaces such as computer screens, mobile devices, or old-fashioned telephones.

This chapter explores the role of technology in the deployment of Virtual Agents, including the need for high security, the ability to tap into outside data, the integration of knowledge, and the complexity of making it all happen. It also spells out how to find the right vendor to harness the technology.

Keeping it Secure

You read about it practically every day — some business has had its systems infiltrated and its data compromised. It's a major financial risk as well as a threat to your organization's good reputation. That's probably not news to you.



The fact is, practically every access point provides an opportunity for unwelcome access. Even point-of-sale systems in hospital cafeterias have opened the door to breaches of patient information.

That's why your Virtual Agent needs to be armed with the latest security technology. It's important no matter what industry you're in, and especially critical if you work in a highly regulated industry, such as Healthcare or Banking. Consider storing any personal information via your CRM system and using the Virtual Agent as a conduit to collect this information.



Of course, any Virtual Agent interaction that involves the sharing of sensitive information should be protected by end-to-end encryption. Depending on the kind of information it will be sharing or business it will be transacting, it quite possibly will need authentication capabilities — that is, the ability to positively ensure that users are who they say they are. This may include the verification of user credentials.



Beyond the risk-management implications, maintaining the highest levels of data security and confidentiality is vital for ensuring high comfort levels among customers. Depending on your business and the job description you've written for your Agent, you may find that the Agent asks for some pretty sensitive information, such as a password to process a transaction. The consequences of any mishandling of that information are high, and if your customer doesn't trust the Agent's security or confidentiality, you're not likely to transact any business.

Exploring Outside Data

Just about everyone has had an important conversation that has inspired a lot of second-guessing — whether it went okay or not so well, you come away thinking, “If only I had more information, I could have responded more effectively.” What if you could plug your brain into a bunch of different data sources, and then instantly tap into them when some additional information could help move the conversation in a fruitful direction?

A Virtual Agent can do that. The sky's the limit when it comes to the kinds of information it can use to inform its dialog with the customer. There is, of course, the knowledge-base of vital information about products and services, packed with

questions and answers and troubleshooting solutions. But that's just the beginning.



Your Virtual Agent personalizes the conversation by checking out the user in your customer relationship management (CRM) system. Instantly, the Virtual Agent knows where the customer is, what industry he or she is in, what the customer's preferences are, and how much money the customer has spent with your organization. That helps the Agent understand the customer's intent, crafting the most pertinent questions and engaging in the most natural conversation possible.

Integrating Knowledge

Outside data sources are just one way the Virtual Agent can gather knowledge and integrate it into its behavior. It can be set up to recognize the customer's current physical location and the type of device on the other end of the conversation. It can take into account what web page the customer was visiting when the interaction was started. It knows whether the customer requested a Virtual Agent dialog, or whether he or she was invited into the conversation.



The Virtual Agent assimilates all of those data signals and bits of disparate information, blends them with the input received directly from the customer through its natural language recognition capabilities, mixes in insights residing in the knowledge-base, and turns it into the knowledge required to engage in a useful dialog.

The whole point of all this knowledge is to steer the customer in the right direction, answer the question, solve the problem, and complete the transaction — whatever the customer's intent was. A key piece of its knowledge is the ability to intuit whether success has been achieved. If so, the Virtual Agent can check to see whether the customer has any other requirement. If not, the Agent can hand off the dialog to a live agent for further assistance, as in Figure 5-1.

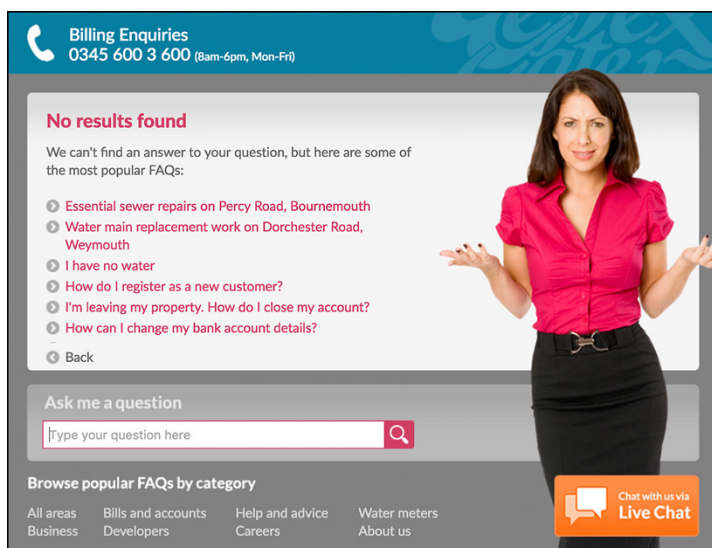


Figure 5-1: Live human chat is just a click away, if needed.

Remembering it's Not Plug and Play

As mentioned in Chapter 4, Virtual Agents require more than just out-of-the-box technology. The magic that makes them work is not a plug-and-play solution. And why should it be? Just as every live human has traits and personalities that are just right for that person, your organization's Virtual Agent needs to reflect the personality and aims of the organization, and be outfitted with exactly the right characteristics and skills.

Standing in the way of a plug-and-play solution are all of the countless combinations of colloquialisms, questions, and meanings that are there in everyday language — complications we don't even notice when we speak and listen, but that can really trip up a machine's understanding. Artificial intelligence technology moves forward all the time, but still is far from being able to understand all of the various ways a customer might ask a question.

Of course, new bot platforms are announced almost every week, providing numerous ways to begin experimenting with simple Chatbots. But as mentioned in Chapter 1, a Chatbot and a Virtual Agent are not quite the same thing. Sure, a Virtual Agent can chat, but it's a combination of business process modelling, serious methodological know-how, and best-practice.



You can say this isn't rocket science and be technically correct. But you could also say, "Don't try this at home." Deploying a Virtual Agent is something that must be done well or it's liable to create as many headaches as it prevents. Reading this book is a good start, but the next step should be to make contact with professionals. That's because Virtual Agents raise customer expectations and if you get them wrong, you risk frustrating or even alienating your audience.

Picking a Vendor



The question is, whom should you call? What factors should you consider when choosing a vendor to enable your deployment of Virtual Agent technology? Here are some things to consider:

- ✔ What is the company's experience level in the realm of Virtual Agents? Is it new to the sector, or does it have a history of developing Virtual Agents with the right appearance, the best interface, and the ideal level of artificial intelligence?
- ✔ Is the vendor's platform integrated, or is it pulling together a loose collection of components? How do the products integrate? Does the vendor own all of the products or is the vendor just re-licensing third-party technology?
- ✔ Does the vendor have significant operations in your country? Where will your data be housed? If it's not in your country, will that pose any compliance issues?
- ✔ Will the vendor help you develop the Virtual Agent's appearance and persona?

- ✔ What is the vendor's commercial model? Are you going to be charged a fee per session, or is there a fixed cost? Will peaks in usage — whether predicted or surprising — impact your costs?
- ✔ Who owns the data, you or the vendor? If you decide to change vendors, can you take the data with you?
- ✔ What experience does the vendor have in integrating Virtual Agents into a multi-channel customer-service strategy? What other channels can you tap into with this vendor, such as web self-service, social self-service, mobile self-service, live chat, email and form management, and contact center knowledge management? Can your services scale up as needed?

Chapter 6

The Agent's Crystal Ball

In This Chapter

- ▶ Authenticating customers
- ▶ Tapping into the power of personalization
- ▶ Breaking down channel barriers
- ▶ Using analytics effectively
- ▶ Enhancing the role of artificial intelligence

The world of Virtual Agents is, like everything else in technology, rapidly evolving. Virtual Agents are becoming increasingly powerful, able to conduct more business independently and resolve more customer issues without the need for live assistance.

This chapter explores some of the ways the use of Virtual Agents continues to evolve and change. Better security measures are always in the offing, personalization offers additional opportunities, analytics will be able to offer valuable insights, and channels will become increasingly integrated as time marches on.

Authenticating the Customers

Just as security is an ever-increasing concern for any kind of electronic communication or transaction, the solutions to the problem continue to evolve. The technologies for authenticating customers are growing more and more sophisticated. The methods used for authentication are similar for Virtual Agents to those used in all mobile and web technologies.



Username and password are, of course, the old standbys. But the future holds a number of other possibilities for customer verification. For example, biometric scanning authenticates customers using fingerprint scans or retinal scans. Another up-and-coming concept is the self-destructing message. That's when a message with sensitive information is transmitted, and then (with some warning) the system automatically destroys that message after a set period of time.

Getting Even More Personal

Personalization is one of the keys to making a Virtual Agent experience appealing to customers. You, as a customer, feel like the Agent knows you and has a good idea of what you're trying to accomplish. This can often be achieved by using a cookie to store a unique identifier which will be used to identify every interaction your customer makes with the Virtual Agent — potentially over multiple channels.

But that's just the beginning of the power of personalization. The Virtual Agent is increasingly adept at learning just how valuable that customer is to the organization, making decisions based upon that determination, and collecting even more data to increase the value.

More capabilities arrive as more internal data is integrated into the Virtual Agent's pool of integrated resources, such as customer relationship management (CRM). That power multiplies as the Virtual Agent gathers more customer-generated data, which can then filter back to better serve the rest of the organization.



Also driving greater personalization is each customer's usage history. Because the Virtual Agent can remember what happened the last time it interacted with the customer, it is better equipped to ascertain what the customer will need the next time. Customers are impressed when they encounter that kind of institutional memory, and conversely, they're frustrated if they make repeat contacts (either to Virtual Agents or live agents) and find that each encounter is like a brand new relationship.

Personalization enhancements are also possible when the Virtual Agent can factor in the user's browsing history before launching the interaction. If your organization is in Financial Services, for example, your Virtual Agent will be that much more effective if it knows that the customer was looking into automotive loan options before engaging in virtual conversation. That customer's needs from the Virtual Agent interaction are likely to be different from the needs of a customer who had been on your website exploring Investment-Management Services.

Breaking Down Channel Barriers

The number of potential customer-service channels seems to multiply like rabbits. Decades ago, it was pretty much limited to in-person assistance, connections via the telephone, and correspondence through mail. When customer use of the Internet exploded, that added not just one channel but many — web self-service through FAQs, email, live chat, and Virtual Agent interaction, to name a few.

Add in mobile devices, and there are infinitely more ways to move from channel to channel, and those channels are now accessible from virtually anywhere. In fact, customers can access alternative channels even from inside your own retail locations, where they can decide to find a sales person or perhaps just scan a product barcode and interact with some other channel.

Then, when you add in social media, the channel possibilities grow exponentially yet again. Just a few examples include Facebook Messenger, Twitter, SMS, perhaps even Slack, Alexa, and Siri. All of these are additional avenues for connecting directly with customers in new and powerful ways.



It goes without saying that this is all quite complicated, more so all the time. The challenge, and opportunity, comes from breaking down the barriers between all these channels to ensure that they are communicating and working collaboratively and seamlessly, not in silos.

They all need access to the same source of knowledge, for example. And they need the ability to share insights that they've learned about a customer with the other channels, so that if the customer connects with a different channel, he or she is not treated like a stranger. All channels also need to complement one another in the way that they represent your brand — it all must be cohesive and connected in order to provide the optimal “omni-channel” customer experience. That's the challenge, and the promise, that the future holds.

Using Analytics Effectively

It's remarkable what you can learn by studying the questions that people ask. Google, for example, put forth the idea that one could track the spread of influenza by monitoring the millions of flu-related Google searches, paying close attention to where the searchers resided. Its model worked quite well for a time, though it became increasingly ineffective when it was unable to adapt to changes in people's search behavior. Google eventually pulled the plug on the experiment, but other researchers have since worked to tweak the concept, and they have high hopes for the power of this kind of use of big data.

You, too, can learn a lot by studying the queries and activities of your Virtual Agents and their customers. For one thing, you can gain early warning signs of an issue with a product if you monitor trends day by day.

As mentioned elsewhere in this book, a key difference between a Virtual Agent and a more passive technology such as self-service FAQ search is that the Virtual Agent should be focused on achieving the goals you have defined for it. Well, if that is the key reason for building your Virtual Agent, then it's also key to reporting on your Virtual Agent.

Your analytics should be able to clearly report on how many goals your Virtual Agent has achieved across all of its conversations with your customers. You may even be able to calculate a return on investment (ROI) this way. Let's say you have a goal to make customers aware of a special offer as part of their conversation, and you see redemption of a voucher code offered by the Virtual Agent. That's all helping toward proving ROI — and your analytics will tell you how many times customers were offered that voucher code.



You can also follow shifts in customer moods and preferences if you monitor longer-term trends in your Virtual Agent activity. Your analytics may even guide you toward ways to improve your products or services, or spotlight the growing need for a service that you don't offer. In that way, your Virtual Agents are serving not only customers, but also your marketing and product-development departments.

Effective use of analytics also can help the Virtual Agents themselves perform better. This becomes possible when you track not just what people are asking the Agents, but also monitor instances in which the Agents are unable to answer a question effectively (or perhaps they're not even able to understand the question correctly).



Analyze those interactions and you can train your Virtual Agents to do better next time — either by helping them understand the question, or by providing them with answers they didn't have before. That, in turn, can help them better discern customer intent, and make the next step in the interaction more accurate.

Making Smart Use of Artificial Intelligence

As mentioned elsewhere in this book, artificial intelligence is both powerful and a potential pitfall. When building your Virtual Agent, you need the right balance of smarts that enhances the customer experience. But that balance will, no doubt, shift as artificial intelligence continues to advance. Capabilities that would be risky to adopt today may become commonplace tomorrow.

The general levels of artificial intelligence are spelled out in Chapter 1, and as noted there, science has not really progressed past what's known as ANI, or artificial narrow intelligence. Computers can do pretty amazing things through natural language recognition, machine learning, and sophisticated algorithms that translate into computational intelligence. But that's still far from human capabilities. Even IBM's remarkable Watson, which seems superhuman in some respects, gets its power from its vast data resources and the algorithms it uses to understand what it needs to find.



That said, there are still many ways to expand the smart use of machine learning in the deployment of Virtual Agents. Learning through the feedback they get, both from customers and from people inside the organization, is a great example.

Machine learning will push the envelope further as more and more interactions take place through Virtual Agents. This concept relies on large amounts of data that, when processed and analyzed, can expand artificial intelligence. As more data is amassed, machine learning accelerates, which means that as Virtual Agents become more ubiquitous and are used more often, their ability to add to their artificial intelligence grows.

Think of machine learning as a way of quickly assimilating lots of information from unstructured sources that can be used as one source of information in your Virtual Agents. Don't gloss over the pitfalls of this approach — answers derived through machine learning will need to be vetted for accuracy, especially in a regulated industry such as Financial Services or Medicine. As yet, machines' learning approaches don't consider tone of voice, either, so if you are building a whole persona to suit your brand, these artificial intelligence techniques are unlikely to save you much time.

Chapter 7

Ten Key Points About Virtual Agents

In This Chapter

- ▶ Setting the parameters
 - ▶ Seeing the big picture
 - ▶ Getting the right look, intelligence, and personality
 - ▶ Asking for assistance
-

It's the book's final chapter. What better time than now to run through some of the most important things to know about deploying a Virtual Agent?

Figure Out the Job First

It makes no sense to get the ball rolling until you have a good idea what you intend to have your Virtual Agent do, and how it will fit into your existing customer-service structure. First, spend some time defining the “job” that the Virtual Agent will fill. Does it include technical support? Answering prospective customers’ questions about products? Helping customers with account issues? Initiating transactions?

With the job mapped out, you’ll be better equipped to figure out the Virtual Agent’s functional requirements. You’ll know, for example, what internal or external data sources will need to be connected, and you’ll have a better idea about the level of artificial intelligence it’ll require (if any. . .).

Fit Into Omni-Channel Strategy

Lots of people are totally into getting their service needs met without ever speaking with a human being, and your Virtual Agent may be perfect for some of them. Others would rather just send an email and wait for a reply. Some are fine with using web self-service. Still others are only satisfied by speaking with a live person, or engaging in a live chat.

Also, when it comes to social media, there are lots of choices, and customers hop around from one to another all the time. You need to satisfy customers' preferences, and do so in a tightly coordinated and connected way. Choosing the channels most suited to your customers' needs, and doing it well, will ensure more satisfying customer experiences. You're not investing in multiple channels just for the sake of it.

If it's part of your omni-channel strategy, a Virtual Agent is not an orphaned piece of marketing — it's a high-profile investment in online customer service which, done well, will increase engagement and satisfaction with your customers. Consider how the Virtual Agent will improve each customer's experience and where it fits as part of your overall online customer-service plan.

Real People Are Not Obsolete

Another key part of your omni-channel strategy is your contact center that's staffed by real, live human beings. There will always be a reason for some customers to escalate from an automated channel to live agent assistance, whether by telephone, email, live chat, callback, or social media. The Virtual Agent should not block such escalations, but enable them where necessary.

Beyond the fact that some customers just want to talk to a person, there are customer requests that the Virtual Agent can't understand. Depending on the complexity of a customer's request, self-service might not be able to offer a quick resolution. In such situations, a live agent is still the best way to go. Your Virtual Agent must be trained to recognize when it's time to hand the conversation to a human and make that experience as seamless as possible.

Forget About Turing

Virtual Agents really are not trying to pass the Turing Test. Their human-like qualities are there, first and foremost, because it makes them feel comfortable and intuitive to customers.

It's exciting to imagine the possibilities of artificial intelligence, but Virtual Agents aren't there to impress people; they're there to serve customers well and get a job done. Pretending to be human is a distraction from that top priority. Judge your Virtual Agent by what it achieves for your organization, not how convincing it is when chatting!

The Right Look is Important

Pretty much everything a Virtual Agent does could be accomplished with a plain, text-only interface. But research shows it just would not work as well. Though the aim is not to fool people into thinking they're conversing with a live human, when they're engaged in natural conversation, it turns out that having a face to look at helps users feel at ease.

And in this case, the more realistic, the better. You might think a computer-generated face to go along with a computer-generated conversation makes perfect sense, but it turns out that just creeps people out. If it looks sort of real but not completely real, users get uncomfortable. Better to use a real image of a real person.

It's Way More than FAQs

You may have already developed a strong system of frequently asked questions (FAQs). That's a good building block for the knowledge-base that will feed the brain of your Virtual Agent. But standard FAQs will only get you so far.

It takes more time to develop a Virtual Agent than it does a standard FAQ system, and maintaining it requires a little extra care, too. That's because it needs to not only have the answers, but properly understand the questions too. It needs

to be optimized in a way that allows its natural language algorithms to comprehend what's being asked, so that the question can be accurately mapped to the correct answer.

Security is Essential

The best, most satisfying Virtual Agent experience can go completely down the drain if the customer's personal data ends up being compromised. Nothing like a hack to spoil an otherwise great time.

That's why it's vital that your Virtual Agent (and all of your other systems) follow the latest, strictest security protocols.

Reach Out for Data

Your Agent's intelligence and personality are vital traits, but it also needs strong connections to pertinent data. That includes a knowledge-base with often-sought information, but you also may branch out to data from other sources.

Through application program interface connections, your Virtual Agent should be able to access customer relationship management (CRM) systems and other data sources that can help it conduct meaningful conversations and transact real business.

The Personal Touch

What makes a Virtual Agent experience extra-special is the feeling that the Agent really knows you, the customer. That CRM connection can be a great addition to the toolkit, because now the Agent knows just who you are and what kind of customer you have been.

Personalization also means remembering that last conversation, what the goals were, how it was resolved, and what kind of business you typically drop by to conduct.

Get Good Help

Yes, there are do-it-yourself Virtual Agents, but many of the best features you've read about in this book might not be present in them, or not nearly as robust. It may take longer for you to deploy one of these systems, and integrating them with other applications can be a real pain without some custom development. The likelihood of something going wrong is higher if you go without a full-service vendor.

So it's better to seek out assistance from someone who knows this business backwards and forwards. You may think it costs more money, but you may end up losing out by going down the DIY route because of that longer development time and the inevitable custom development.

Interested in Virtual Agents or seeing what Synthetix can do for you?

Synthetix would like to offer readers of 'Virtual Agents for Dummies' the opportunity to book a *1-2-1 online meeting to investigate your current solution/s. As part of the session, we can discuss how they are utilised and identify opportunities where we might compliment/replace your existing solutions to enable you to deliver exceptional customer experiences to become top of your rank.

What will you get out of a 1-2-1 session?

- A review of your existing setup and some best practice advice on how best to manage customer interactions across multiple channels.
- Tips to ensure you get offer clients great service with reduced effort and enhanced customer engagement.
- Guidance if you are considering expanding your online customer service into multiple channels - to help you decide whether to bot or not.

*Eligibility criteria will apply

www.synthetix.com/dummiesreferral

synthetix

Use artificial intelligence for genuine customer service

Virtual Agents sound like science fiction — customer-service agents that are entirely computer-driven, not live human beings. They've actually been around for a while, but the artificial intelligence that brings them to life keeps getting more powerful. The question is, what kinds of service are ideal for Virtual Agents, and what is better left to people? How smart should Virtual Agents be? What are the advantages, and the potential pitfalls? And, how do Virtual Agents fit into your organization's overall omni-channel customer-service strategy?

- **Meet the Virtual Agent** — *explore what it is, what it's not, how it's artificially intelligent, and what it can do for your organization*
- **Plan the job** — *know what your Agent will be doing before you get started designing*
- **Create a personality** — *build an Agent that will engage with your customers in a lifelike way*
- **Feed your Agent's brain** — *ensure consistency by tapping into the same knowledge base you use elsewhere*
- **See the big picture** — *know where Virtual Agents fit into your omni-channel strategy, and what role humans will play*

Synthesia are leaders in customer contact SaaS technologies which include Virtual Agents, Intelligent FAQ Search, Contact Centre Knowledge-bases, Email Management, Dynamic Web Forms, Live Chat and APIs.



Open the book and find:

- Insights from people who've been creating Virtual Agents for years
- What works best for artificial intelligence, and where it falls short
- How a Virtual Agent looks, and how it feels to interact with one
- The technology your Agent will need to be dazzlingly helpful, and completely secure
- Where to turn for help in bringing your Virtual Agent online

Go to [Dummies.com](https://dummies.com)
for more!

WILEY END USER LICENSE AGREEMENT

Go to www.wiley.com/go/eula to access Wiley's ebook EULA.