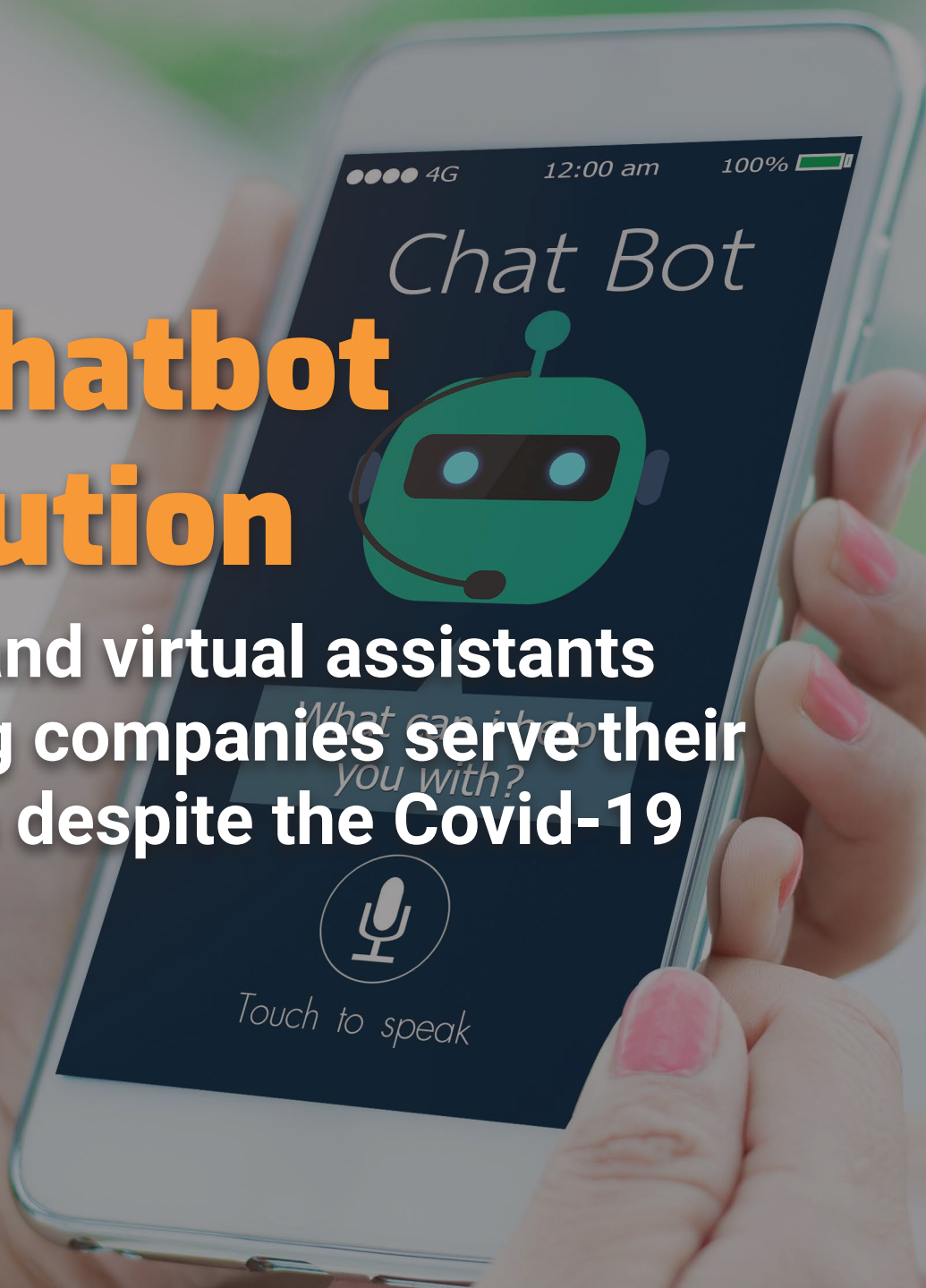


WHITEPAPER

# The chatbot revolution

Chatbots and virtual assistants are helping companies serve their customers despite the Covid-19 pandemic



# Introduction: Chatbots and virtual assistants are helping companies survive the pandemic

Social distancing measures, supply chain disruptions, people working from home, and companies going through cost cuttings are all consequences of the Covid-19 pandemic.

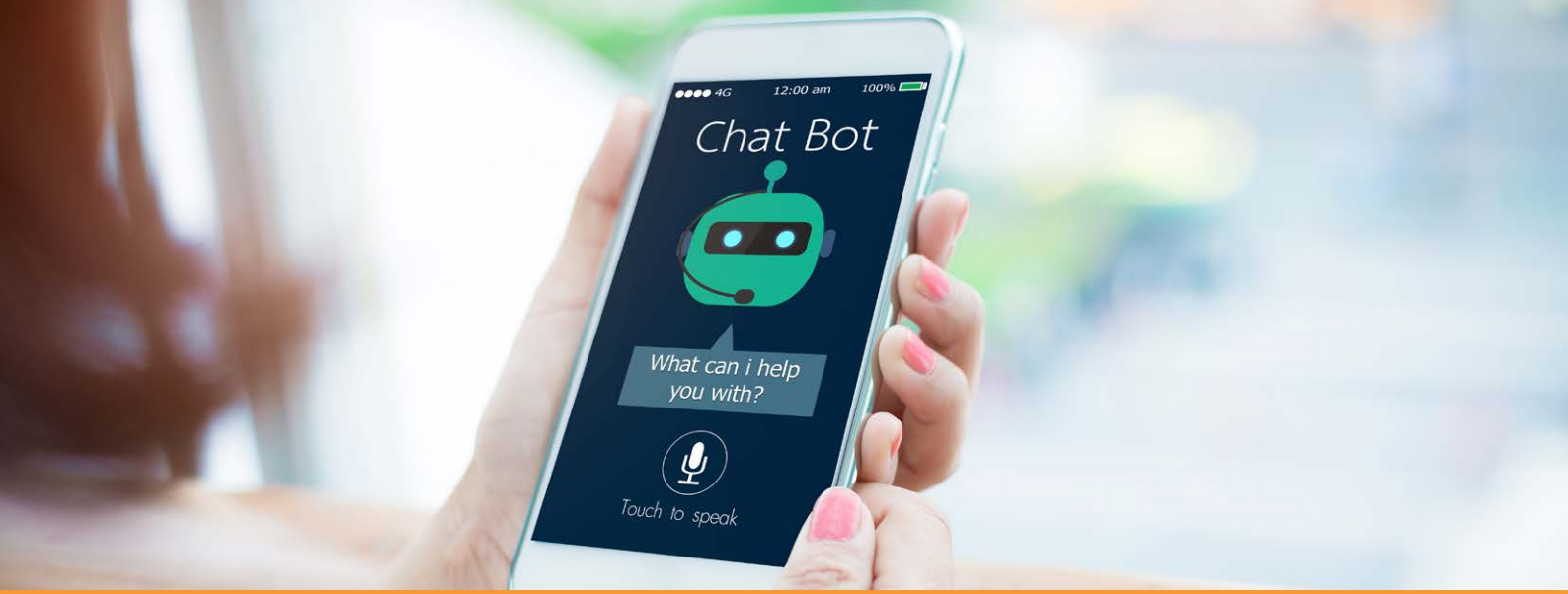
Virtual assistants and automation have quickly become key technologies in helping businesses meet the needs of their customers during these difficult times.

The rapid increase in customer queries and user requests has led to companies using technology to respond effectively. Many companies used bots to respond to thousands of queries a day during the pandemic - on everything from revised

opening hours, to handling refunds, to providing key information about the symptoms of Covid-19.

However, despite some key success stories of their use during the pandemic, most customer service interactions today can't be fully completed just by a bot.

In this whitepaper, we explore how chatbots have become an essential technology for businesses during the pandemic, while also highlighting that much work needs to be done to make them more sophisticated. We identify 5 key success factors that executives should consider when deciding to build and implement a bot.



## In this whitepaper we will review:

- The role of automation and virtual assistants during the Covid-19 pandemic
- The rudimentary nature of today's chatbots
- It's all about conversation...but your customers don't want to chat
- Chatbots in finance - executives see their potential in producing better customer experiences
- Leading financial organizations are having success with virtual assistants
- The spectrum of sophistication of virtual assistants
- 5 key success factors to achieve success with bots
- Building chatbots based on IBM Watson

# The role of automation and visual assistants amid COVID-19

During the pandemic, many businesses experienced explosive growth in the number of customer requests and queries - as people tried to find out more information. Sectors from retail, healthcare, to banking all turned to chatbots to help meet the needs of people and answer as many queries as possible.

Travel companies used bots to help respond to thousands of queries about cancelled flights and refunds - handling a quantity of queries that would have been impossible to do manually. In other cases, contact centers had to close, leaving the bot as the only point of contact for customers.

Some notable examples during the crisis, include [IBM's Watson Assistant for Citizens](#) - this enabled public authorities to provide information on everything from Covid-19 testing to how people could access unemployment benefits. In April, Google released the [Rapid Response Virtual Agent](#), which enabled companies to quickly build a virtual agent and deliver automated services.

Meanwhile, automation and chatbots have played a role in optimizing the customer support function during the pandemic. Implementing conversational solutions and automating tasks can [lower costs by 30%](#), [reduce wait-times 59%](#), and save time on repetitive [customer service tasks 43%](#).

With companies adapting to work from home, chatbots may also have a future role in supporting remote workers. Human resource chatbots can optimize onboarding processes, provide step by step guidance and access to information, benefiting employees based in different headquarters and geographical locations.

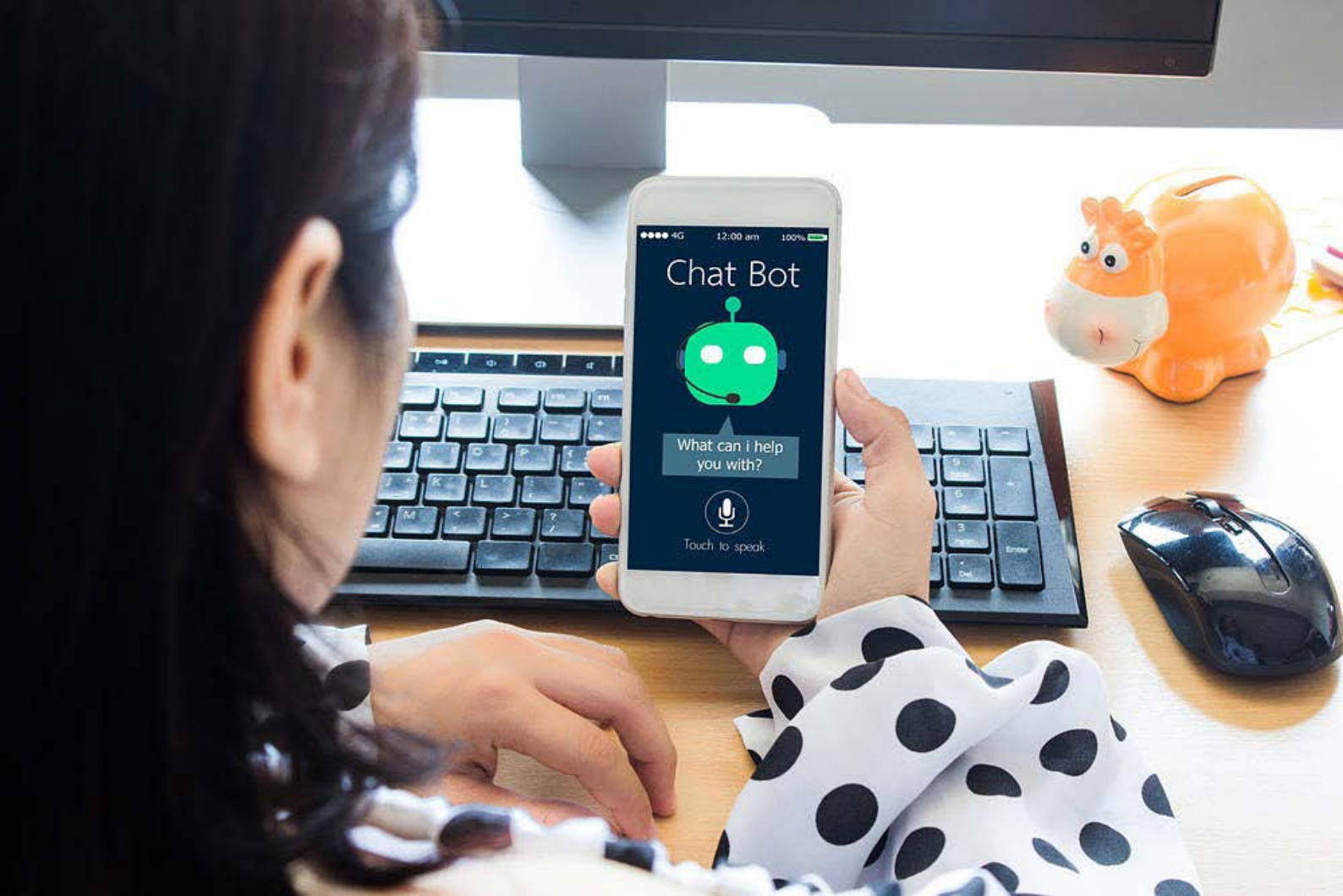
# The rudimentary nature of today's chatbots

While chatbots have a lot of potential and have demonstrated their value during the pandemic, there remains significant areas for improvement.

Today they are typically characterized by their rudimentary nature - helping customers with simple, transactional tasks. They have limited dialogue capability. They struggle to understand different accents or colloquialisms.

As the research company Forrester states, "For all the hype about chatbots handling customer service, they're little more than the interactive voice-response systems that make customers scream into their phones".

A further challenge is that there are few developers or business executives who have experience building and implementing chatbots. Difficulties in finding experienced individuals means even when organizations want to start using chatbots, they are struggling to do so. Providers of commercial chatbot platforms (such as Cline and Kasisto) offer an off-the-shelf possibility to build a white-



label chatbot - however they are hampered by the fact that chatbots need to be highly customized to individual business requirements.

Meanwhile, you can build a basic chatbot, on a commercial platform (such as Chatfuel), within a matter of hours - indeed, for developers that want to get a quick overview of how to work with them, they represent a good starting point. However, for enterprises, their basic nature, means they will struggle to deliver an enjoyable customer experience, which is ultimately one of the main reasons for implementing a bot.

# It's all about conversation...but your customers don't want to chat

Building a powerful and enjoyable customer experience is the number one challenge with chatbots. As the consulting company Deloitte succinctly puts it, “customers are not as excited by the technology as you”.

Customers want to be helped to achieve their task at hand as quickly and effectively as possible. This is why, so-far, relatively simple chatbots such as those used to track the delivery of mail or parcels, have worked well.

When there are complex scenarios, such as fraught and sensitive conversations involving emotions (for example, when a customer wants to resolve a problem after making a payment), it requires deep and continuous learning according to the customers' desire - in these situations, the bot could cause counterproductive results and a negative impact for the customer and the business, if it has not been built correctly.



Building these more complex chatbots is however becoming easier. The maturity of chatbots, in terms of the underlying technology, has simplified implementations. But it still requires a high level of expertise to build and train bots for complex tasks with a high level of conversational skills.

# Chatbots in finance - executives see their potential in producing better customer experiences

The financial services industry is in the midst of a fundamental shift, driven by new technologies. Banks and financial institutions are finding out that their 20th century systems, processes, and technologies are no longer sufficient in a world increasingly dominated by digitally-native fintech companies. In retail banking and the payments sector, customers want new types of services, which provide an experience on a par with that they are used to when using their iPhone.

Here at Belatrix, we believe that when looking specifically at the financial services industry, chatbots and virtual assistants will have an increasingly important role to play in building these new digital experiences. Based on our discussions with leading executives in the industry, we see significant potential in two key areas:

- **Creating a differentiated customer experience.**

From understanding conversational interaction to using customer insights to provide advanced recommendations, financial institutions are increasingly using chatbots to create powerful customer experiences.

More advanced chatbots using the power of artificial intelligence (AI), natural language processing, and sentiment analysis are able to provide that “personal touch” that is lacking in more rudimentary versions. That enables financial organizations to be able to provide customized offers to clients.

- **Deliver insights at the point in time customers are looking for them.** As this article by Jim Marous, publisher of the Digital Banking Report, points out, the new generation of chatbots are able to “engage in conversational banking where insights are delivered proactively through contextual decision making”.

# Leading financial organizations are having success with virtual assistants

Over the past year, we have witnessed an increasing focus on banks and their fintech counterparts investing in, and building, new virtual assistants. Some notable examples include:

- **Bank of America launched “Erika”.** In June 2018, Bank of America announced that more than a million people had used their chatbot, nicknamed “Erika”, in the first three months after it was launched. This number is particularly impressive, given the bank has 25 million mobile app customers. The number one use case for customers using the chatbot is to search their transactions, either by date range or merchant.
- **JP Morgan has taken chatbots beyond retail banking.** Moving beyond retail banking, JP Morgan’s treasury services announced they are building a new virtual assistant to help with

corporate payments.

- **Capital One has steadily improved their assistant.** In mid-2017, Capital One launched their virtual assistant, “Eno”, which enabled customers to send a text message to receive key information about their account. Since its launch, the bank has steadily increased its functionality - now providing real-time alerts, and creating virtual card numbers to make online shopping easier.

# The spectrum of sophistication of virtual assistants

As we have already highlighted, many of today's virtual assistants are rudimentary in nature. Out of the over 300,000 chatbots on Facebook Messenger for example, few have the capabilities to handle complex dialogue with individuals.

There exists a broad spectrum of sophistication of virtual assistants, from those that are simplistic, Q&A style bots, to those that use the full capabilities of AI and natural language processing to help customers with complex tasks. A further key aspect that determines the sophistication of the bot is its level of integration with business processes.

While it may be tempting to want to create the most advanced bot possible, the simplistic, Q&A style bots can also provide significant customer value, if they are built with careful consideration of what customers are looking for.

# 5 key success factors to achieve success with bots

Based on our experience working with virtual assistants and chatbots, here at Belatrix we have distilled five key success factors for organizations wanting to start their journey:

## **1. Start with researching your customer needs.**

Understanding the customer journey, and the potential value of a chatbot at specific parts of the journey is key.

What does your customer want? Do customers really want a chatbot and will they see the value in it? Standardized processes and services, which can have automation behind them, are ideal candidates.

Services requiring individualized or customized services, will be challenging to replicate in a bot. Methodologies such as Design Thinking, which involve prototyping and experimentation, can help here.

**2. After researching your needs, decide if you want a bot, and what kind.** As we have highlighted in this report, there exists a broad spectrum of sophistication of bots. Identifying a niche need, but where you can deliver a lot of value, may mean you can build a simplistic, Q&A style bot with significantly less investment and complexity than a more complex bot.

**3. Examine the different technological possibilities for bots.** The vendor landscape for bots is broad, both respect to the underlying technology, as well as the capability to integrate capabilities from services such as Apple Siri and Amazon's Alexa.

Consider for example which user service you want the bot to be available on (e.g. Facebook Messenger, Twitter, or Skype, or whether you want to have it accessible via your mobile app).

**4. Build security in from the start.** Particularly in highly-regulated industries such as financial services and healthcare, security protocols for your chatbot need to be built in from the beginning of development.

Many financial institutions for example use self-destructing messages to protect client data in the chatbot. Meanwhile, make sure to use secure software development best practices.

**5. Feed your chatbot regularly - focus on ongoing and continuous development.**

Version 1 of your bot should not represent the



end of your journey. Just as we highlighted in the example of Capital One's Eno chatbot earlier in the report, the bank has continually added features to provide greater value to its customers.

Make sure that it is delivering the expected value to you and your customers. Verify your return on investment and level of customer satisfaction.

# Building chatbots based on IBM Watson

Recently, Belatrix has partnered with IBM Watson to help create chatbots for our clients. IBM Watson, is IBM's AI software platform, which enables developers to more easily integrate AI and deep learning capabilities into applications via APIs.

Some of the bots and proof of concepts that our artificial intelligence center of excellence has been working on include:

- **Banking product inquiry bot.** Here customers could provide their credit need and the bot suggests the best product that fit to their needs. It also provides a simulation of different loan installment plans.
- **Credit request bot.** Here customers could request financial credit and the bot asks information according to the type of loan the customer is requesting. The bot captures their ID from a snapshot.
- **Account balance and queries for debt installment bot.** Here the financial services

organization envisions a scenario where the bot is integrated to robotic process automation (RPA). It will involve the bot getting the information from the companies' loan system using a robot.

These chatbots are based on the IBM Watson Assistant, and use natural language processing, voice recognition, speech to text, and image recognition.

# Conclusion: Start investigating today the power of virtual assistants

For the first time in history, computers now have the capability to respond accurately to natural human dialogue. This represents a fundamental shift in how we, as people and as customers, engage with machines.

The manifestation of this capability, as chatbots and virtual assistants, is creating tremendous new opportunities for organizations to create powerful new digital experiences. It has been described as the “the kind of disruption that happens once in a decade that affects the daily lives of billions of consumers”.

**To find out more about how we can help you and your organization, review our dedicated [chatbot and virtual assistant services](#).**

# About Belatrix Software

Belatrix Software helps companies thrive in the digital world.

Organizations partner with Belatrix to turn ideas into high quality, innovative software based on highly-tuned Agile development processes. Customers use Belatrix's digital transformation services to create best-in-class software products, lower time to market, and gain competitive edge.

Belatrix's dedicated labs, focusing on UX, Blockchain, Cloud, mobile, RPA, DevOps, and QA automation,

help organizations become digital leaders.

Belatrix's clients include both established Fortune level and emerging, venture backed firms. Some of the firm's clients include Disney, Adobe, AOL, PwC, and Shutterfly.

Belatrix is a South American company with offices in New York, San Francisco, Barcelona, Mendoza, Buenos Aires, Bogotá and Lima. For more information, visit <https://www.belatrixsf.com>.

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