

# Smart talk



How organizations and  
consumers are embracing  
**voice** and **chat assistants**



# Introduction

Conversational interfaces have woven themselves into the fabric of our lives. Consumers are using them to turn on the lights, to cook an egg to perfection, and to research and buy goods. With consumers building a strong relationship with these interfaces, they also represent a fantastic opportunity for brands to humanize – at scale – the relationships they have with their consumers. This involves using the learnings from this new type of interaction to offer experiences that are contextually relevant, helpful, and personal. With this report showing how consumers are looking for humanized interactions with bots, conversational interfaces offer an exciting opportunity for brands to build a more authentic and emotional connection with their consumers, shifting from transactional interactions to deeper relationships.

In this study, we examine two types of conversational interfaces: voice assistants (where the input is spoken) and chat assistants (where the input is via a keyboard). The increasing capabilities and ubiquity of voice assistants, in particular, are important drivers behind the popularity of these interfaces:

- Alexa is reported to have 50,000 skills (functionalities), be compatible with 20,000 connected devices, and is used by more than 3,500 brands.<sup>1</sup>
- Google's voice interfaces support more than 30 languages and the company plans to roll out voice capability to 80 different countries.<sup>2</sup>
- Microsoft and Amazon have announced a partnership between their voice assistants – Alexa and Cortana – to enable additional functionalities and greater reach for their customers.<sup>3</sup>

At the same time, organizations are also adopting and rolling out chat assistants. They use them to streamline customer service operations or to get a consumer to the purchase point by providing store, pricing, and product details along the purchase journey.

While consumers have embraced these tools, many organizations have not yet caught up with expectations. We will see in this report that leaders in this domain, with a mature approach to these tools, are in the minority. In addition, most of the use cases that are being used are anchored in delivering convenience. However, consumers (once trust is established) are ready to go to the next level of engagement – they want to see higher levels of personalization, emotional connection, and value.

To understand consumers' views on conversational interfaces and how their expectations have evolved since our research on voice assistants released last year,<sup>4</sup> we launched this latest comprehensive research project. In addition to conducting one-on-one interviews with executives, we surveyed consumers and executives from three different industries – consumer products and retail, financial services, and automotive. We talked to:

- More than 12,000 consumers who have used and continue to use either voice assistant or chat assistant or both.
- 1,000 executives from these three industries, including pure-play digital players.

As well as providing insight into consumers' needs, we also looked at deployment levels across the different sectors, the benefits realized, and what differentiates successful companies from the rest. In this report, we look at:

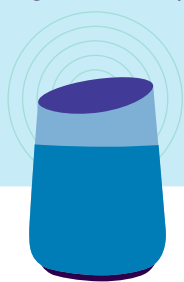
1. How consumer appetite for conversational interfaces is growing and how organizations are reacting to this
2. How voice is emerging as the preferred medium of interaction in many parts of the consumer journey
3. The myriad benefits that companies are reaping from voice and chat assistants
4. How organizations should think about implementing conversational interfaces to give themselves the best chance of driving growth and return.

## What are Voice Assistants and Chat Assistants?

### Voice Assistants

For the purpose of this survey, **Voice Assistants** refer to mediums (with or without screens) that can be accessed through voice commands and inputs. They help users perform a variety of tasks not limited to researching products and services, purchases, providing information, query handling or integrating with other connected objects to perform tasks. These computer-generated applications also learn user preferences over time and gradually personalize interactions suited to the user.

Examples include Siri, Google Home, Alexa either on smart speakers or embedded in an organization's app, website, or contact center



### Chat Assistants

For the purpose of this survey, **Chat Assistants** refer to mediums that can be accessed through written commands and inputs. They help users perform a variety of tasks, not limited to researching products and services, purchases, providing information, or query handling. These computer-generated applications also learn user preferences over time and gradually personalize interactions suited to the user.

Examples include chat interfaces embedded in an organization's app/website or in social media platforms like Facebook



# Key findings

## Conversational assistants are going mainstream

- Many consumers are highly satisfied with their conversational assistant experience.
- Most organizations consider conversational assistants to be crucial for customer engagement, and indeed the overall customer experience.
- Consumers like voice assistants as they allow for multitasking; and they like chat assistants because their level of personalization evolves over time.

## Voice is fast becoming consumers' preferred way to interact

- Compared to last year, the number of consumers using voice has shown a meaningful increase.
- Consumers in key geographic markets – from the UK to Germany – have increased their use of voice.
- Our research points to customers increasingly preferring to use voice assistants across the consumer journey by 2022.

## Many organizations are already driving significant benefits from conversational assistants

- 76% have realized quantifiable benefits from their voice and chat initiatives.
- 58% say that these benefits met or exceeded their expectations.
- Benefits come from a variety of areas, from reducing customer service costs to increased NPS.

## Less than 30% of companies show conversational interface maturity

- We found a small group of high-performing companies – the “Leaders” – who outperform the rest of the sample on two critical dimensions:
  - Customer centricity, including areas such as developing these tools’ capabilities, transparency, and personalization
  - Organizational capability, including areas such as a defined strategy, employee knowledge and training, and effective processes.

We found that the Leaders, who realize greater benefits than others, focus their efforts on consumer-related factors. These include, for example, gaining trust, understanding preferences, and better meeting needs. These success factors were highlighted in our previous research on AI in CX as well.<sup>5</sup>

## Four factors are critical if organizations want to leverage this growing consumer appetite for conversational interfaces

- Find the right balance between human and robotic interactions to drive greater engagement
- Equip the conversational assistants with additional features, such as images/videos
- Develop talent along three key areas: experience design, architecture/technology and legal/compliance.
- Focus on gaining consumer trust by solving consumer pain points and being contextually relevant when selecting use cases for conversational assistants.

# Conversational assistants are going mainstream

## Conversational assistants are the busy consumer's trusted companion

Across sectors, more and more consumers are using conversational interfaces. For example, close to three-quarters of consumers (74%) say they use conversational assistants for researching or buying products and services, and other functions (see Figure 1). The reasons for this popularity are not difficult to see:

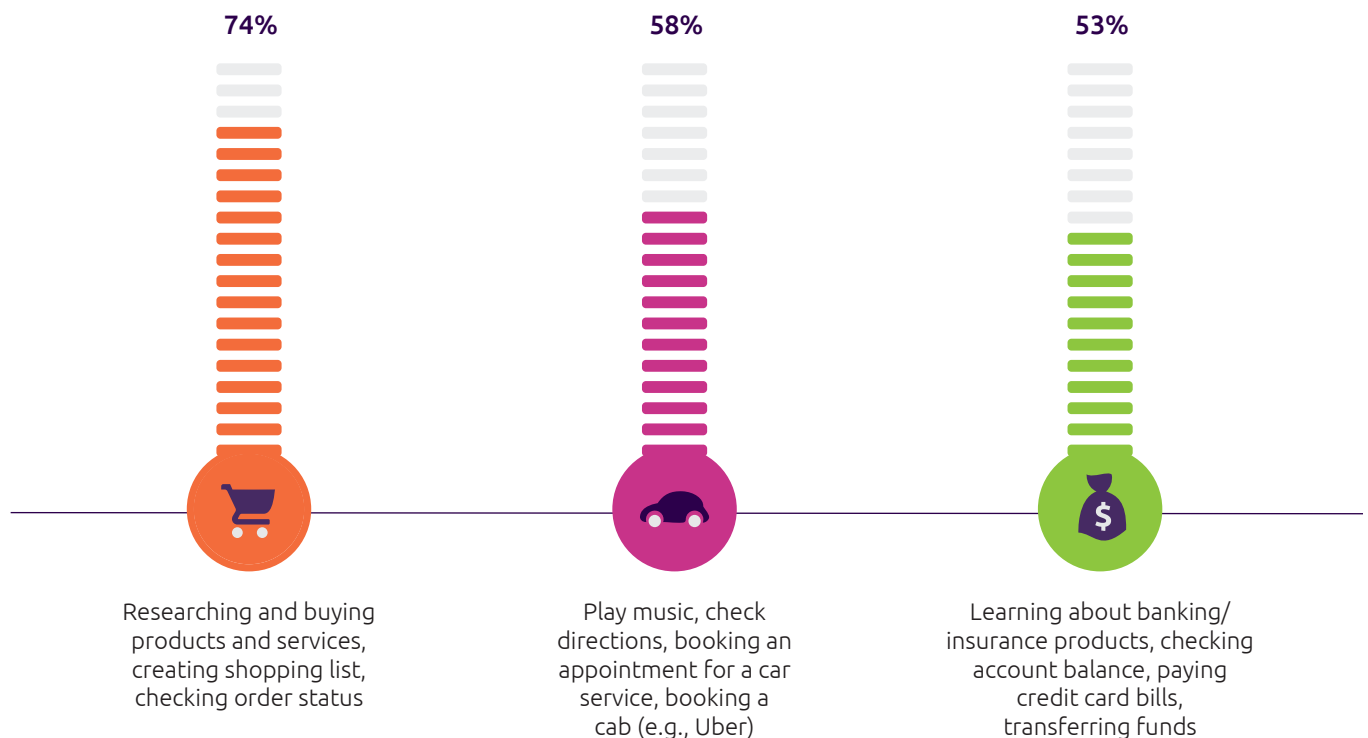
- With voice, 68% of consumers say that it allows for multi-tasking and accomplishing tasks hands-free
- With chat, 59% say that it keeps improving its personalization over time

Satisfaction levels are also healthy:

- For voice, 71% said they were satisfied with their smartphone voice assistants, such as Siri
- For chat, 62% said they were satisfied with the chat assistants they find on a company's website.

**Figure 1.** Consumer use of conversational interfaces, by different functions, global data

Have you ever used a voice/chat assistant for the following activities?



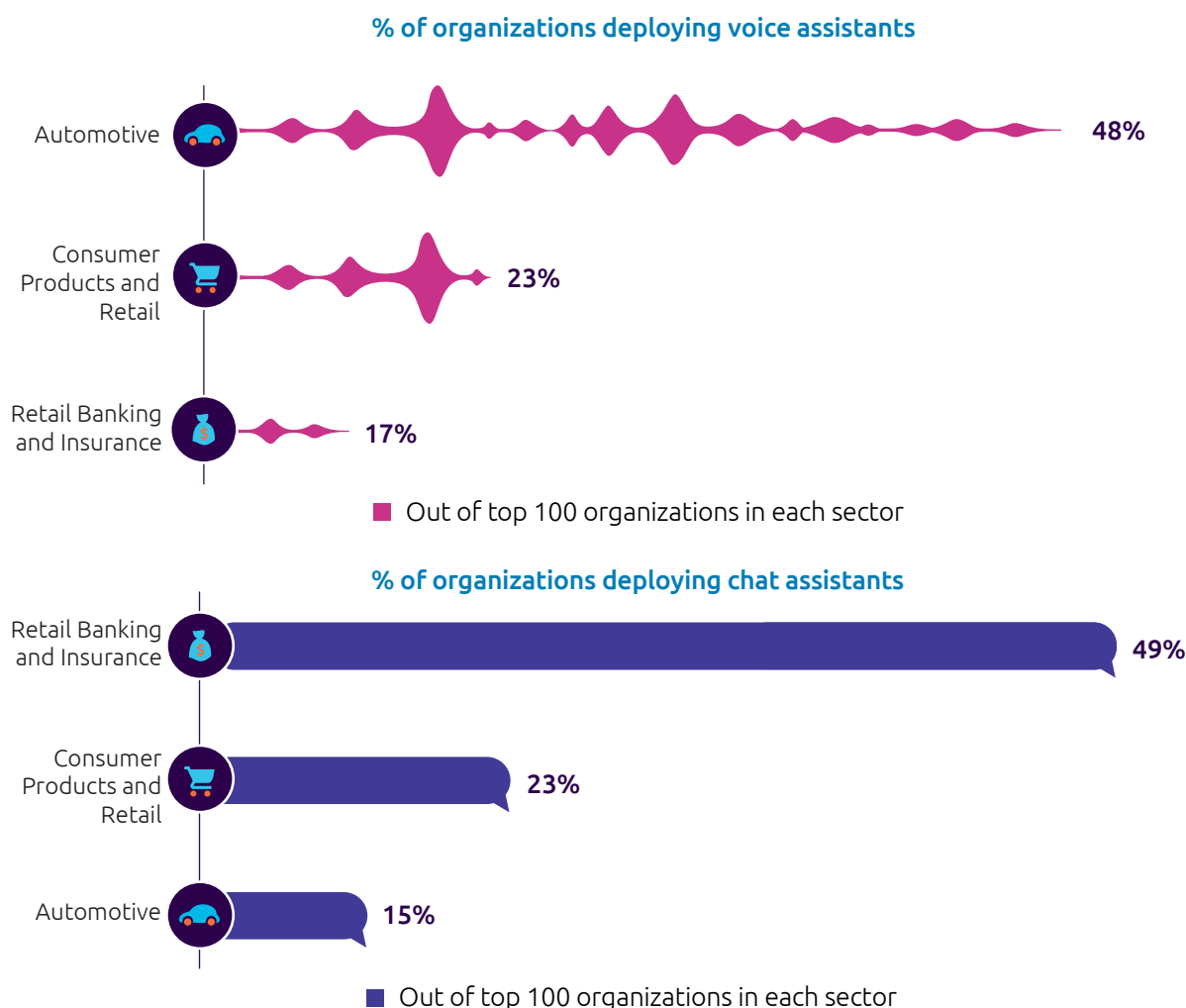
Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 12,247 consumers using voice/chat assistants.

## Despite recognizing the strategic importance of conversational assistants, organizations/brands lag behind in deployment

Consumer acceptance is mirrored by the importance that organizations place on this concept. The vast majority of organizations (74%) said that conversational assistants are a key enabler of the company's business and customer engagement strategy.

However, the importance attached to the concept is not yet reflected in actual deployment levels. As Figure 2 shows, out of the top 100 organizations globally, less than half of the top players in automotive, consumer products, and banking and insurance have voice assistants, and the same is true of chat. In consumer products, less than a quarter (23%) have voice assistants and chat assistants.

**Figure 2.** Out of the top 100 organizations, percentage that has conversational assistants



Sources: Company websites, news articles, Capgemini Research Institute analysis.

These are firms that are working on conversational assistants at any stage of maturity: pilot, multi-site deployment, and full-scale deployment.



- Automotive: Players are using voice assistants to allow drivers to control the vehicle and access concierge-driven functionalities. *“Soon, Volvo drivers will have direct access to thousands of in-car apps that make daily life easier and the connected in-car experience more enjoyable,”* says Henrik Green, senior vice president of Research and Development at Volvo Cars (referring to Volvo’s in-car voice assistant, which acts as the central interface for operating the vehicle’s infotainment system, from adjusting temperatures, navigation, music, to sending messages).<sup>6</sup>
- Retail Banking and Insurance: Financial services firms have been steadily streamlining their customer services and replacing the routine and FAQ-type queries with chat assistants. *“Bots have a very important role to play in the future of customer service as they are an efficient way to deliver a consistent outcome for repetitive tasks”* says Daniel Bergan, director of omni-channel transformation at Australian-based Westpac Banking, about the chat assistant introduced to answer consumers’ financial product-related queries.<sup>7</sup>
- Consumer Products and Retail: Retailers are keen to leverage the opportunities these assistants offer. *“Customers are increasingly using voice commands in their everyday lives to check the weather, play music, or find out the latest news,”* says Matt Kelleher, online director at UK-based Morrisons. *“It is important we follow this emerging trend and make Morrisons an easier and more accessible place to shop for groceries online. It’s exciting that our customers can now shop without even needing to login to a computer or mobile phone.”*<sup>8</sup>

It is worth noting that the trend of text and chat increasingly replacing people making calls or sending emails has driven the adoption of chat assistants. However, voice assistants are a relatively newer technology compared to chat assistants. As a result, many deployments will not be at scale. But we did find that across the three sectors, organizations are actively deploying both voice and chat assistants regionally and also globally. In “Voice and chat in action,” we outline some key examples.





## Voice and chat in action: industry examples

		
<b>Consumer Products and Retail</b>	<ul style="list-style-type: none"> <li>• The voice assistants of US-based Best Buy offer product information, nearby-store locations, and even a tailored list of product recommendations based upon previous customer profile.<sup>9</sup></li> <li>• The voice assistant of German supermarket player Rewe provides value-added services, from searching for recipes to reading out lists of ingredients when people cook their favorite dishes.<sup>10</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Nordstrom's chatbot, introduced for the holiday season, provided users with personalized gifting suggestions by interacting with them and understanding their preferences.<sup>11</sup></li> <li>• 7-Eleven's chatbot helps shoppers with their loyalty programs – providing information on points earned, new programs, and redemption.<sup>12</sup></li> </ul>
<b>Automotive</b>	<ul style="list-style-type: none"> <li>• Volkswagen provides in-car infotainment and navigation requests through voice assistants with advanced speech recognition systems.<sup>13</sup></li> <li>• Toyota's in-car voice assistants integrate with at-home voice interfaces so users can control the functions of the at-home interfaces (such as setting the temperature before entering the home) from the car.<sup>14</sup></li> <li>• In China, Daimler, Audi, and Volvo cars use native voice assistants to monitor fuel levels, mileage, and engine and battery status, as well as to control car doors and windows.<sup>15</sup></li> </ul>	<ul style="list-style-type: none"> <li>• In India, automotive player Maruti Suzuki rolled out a marketing program for a car launch which included a video with an embedded chatbot. Its aim is to answer first-level queries from consumers interested in the new car model.<sup>16</sup></li> </ul>
<b>Retail Banking and Insurance</b>	<ul style="list-style-type: none"> <li>• Santander's UK customers can make payments, check account balances and report lost cards using voice interfaces.<sup>17</sup></li> <li>• UBS Group's consumers can use their voice-enabled speakers to ask questions such as "What is inflation?" or "How is the economy faring?" to enhance their financial literacy.<sup>18</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Zara, a chatbot from Zurich UK insurance, helps customers file non-emergency home or car insurance claims. It collects the information online and passes this onto the human handler, significantly reducing claims- processing time.<sup>19</sup></li> </ul>



Less than **50%** of the top players in automotive, consumer products and retail, and banking and insurance have deployed voice/chat assistants

# Consumers are increasingly focused on voice when interacting with organizations

## The adoption of voice assistants has increased since November 2017

Many consumers already use voice assistants and are growing increasingly comfortable using these solutions in their daily

lives (see Figure 3). Since we conducted our [last study](#) in November 2017, overall voice adoption in key global markets (the US, UK, France, and Germany) has risen from 51% to 55%. In Germany, for example, it has jumped from 36% in 2017 to 51% today.

**Figure 3.** Use of voice assistants has increased since November 2017

Overall usage of voice assistants,  
November 2017 vs May 2019 - US, UK, France, and Germany

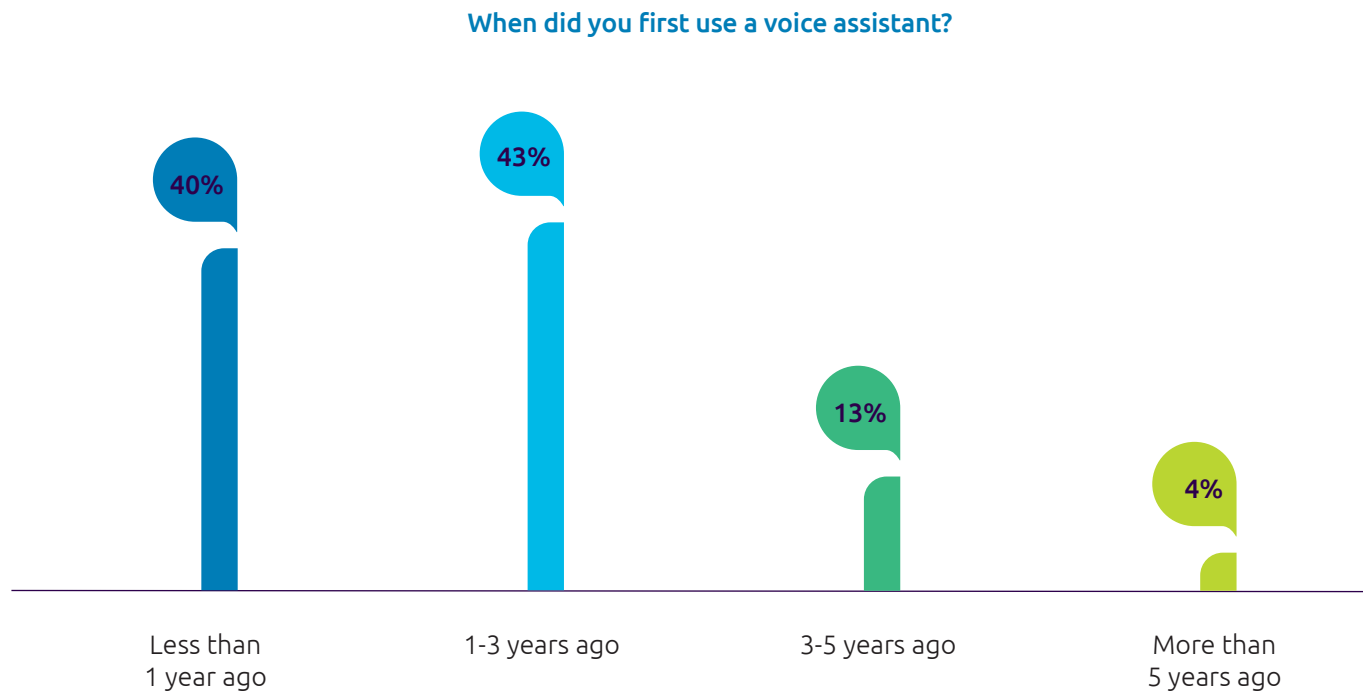


Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 5,037 consumers using voice assistants (consumers from US, UK, France, and Germany only); Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives, 2018.

 **40%** of those now using voice assistants have started doing so in the last year

And, with adoption on the rise, we also found that many are recent converts. Our research shows that, globally, 40% first used their voice assistant less than a year ago (see Figure 4).

**Figure 4.** Distribution of the first-time use of voice assistant



Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N=10,254 consumers using voice assistants.

The use of voice assistants is drawing consumers away from an organization's physical stores where they would then interact with a human agent. Nearly 70% of consumers, on average, have indicated that over the next three years they will progressively replace visits to the automotive dealer, store, or bank with their voice assistants.

Since we conducted our last study in November 2017, use of voice assistants in key global markets (the US, UK, France, and

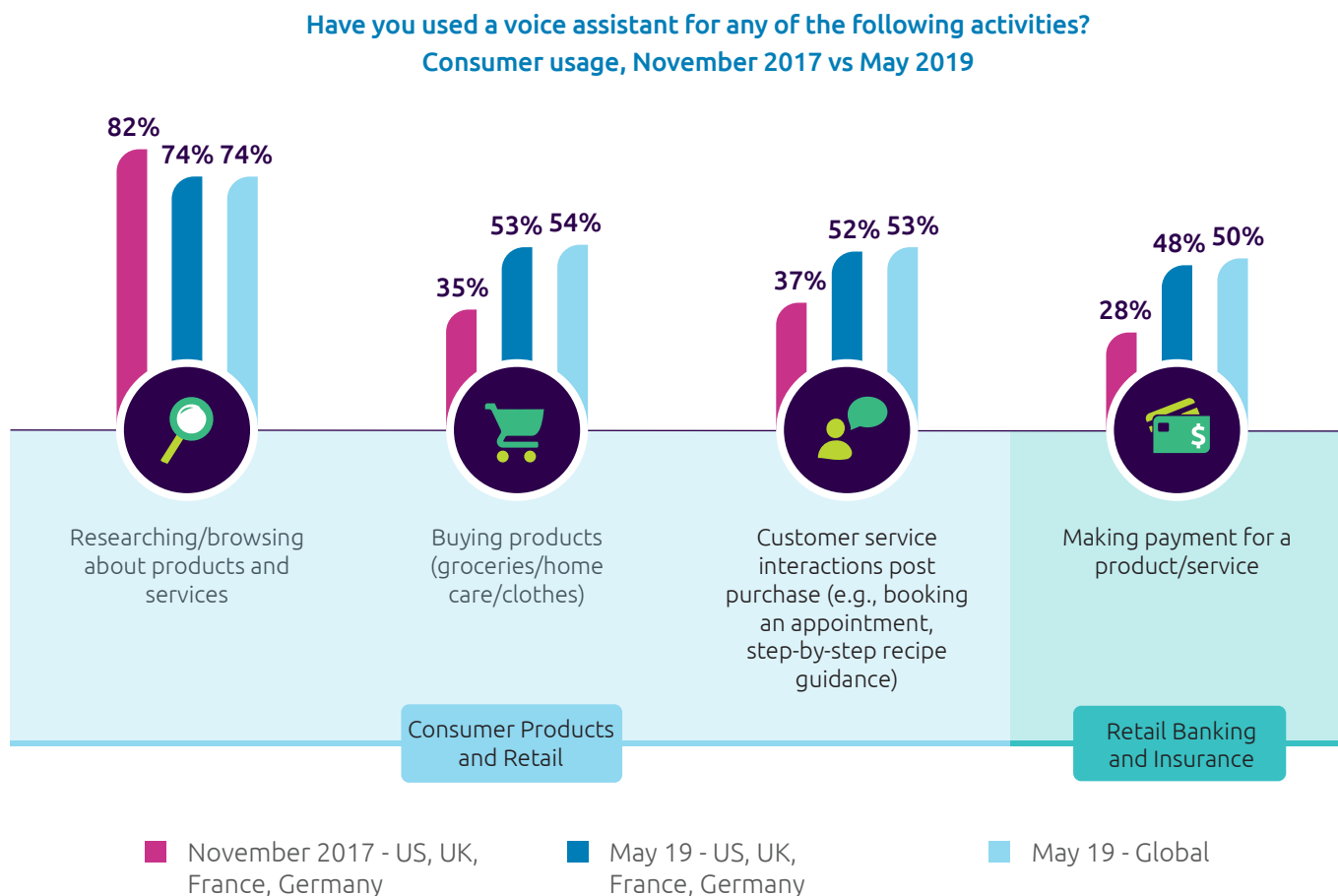
Germany) already evolved significantly (see Figure 5). Take, for example, the consumer products and retail sector:

- 53% of consumers have already used a voice assistant to buy products in 2019 against 35% in 2017.
- 52% have interacted with a customer service via their voice assistant in 2019 vs. 37% in 2017.



Over the next three years, **70%** of consumers, on average, will replace their visits to the dealer, store, or bank with their voice assistants

**Figure 5.** More consumers are using voice assistants to buy products and reach out to customer service



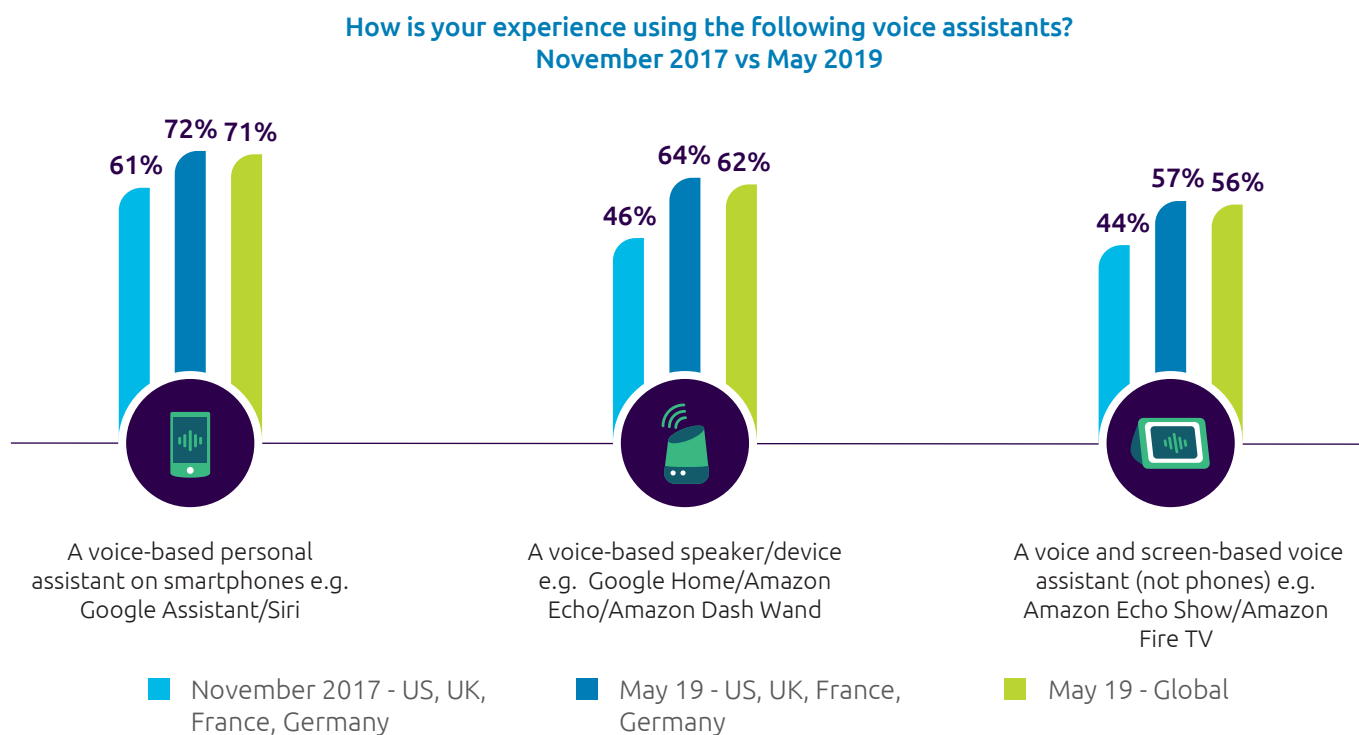
Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 5,037 consumers using voice assistants (consumers from US, UK, France, and Germany only); Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives, 2018.

Our research has also shown that many of the customers are satisfied with their voice assistant experience. Interestingly, the satisfaction levels are slightly higher (71%) for voice assistants on phones compared to that of devices such as Google Home or Amazon Echo (62%). One probable factor for this could be the 24/7 accessibility to voice assistants on smartphones.



**Consumers are increasingly using voice assistants to research about and buy products, and to reach out to customer service**

**Figure 6.** The majority of consumers are satisfied with their experience of using voice assistants



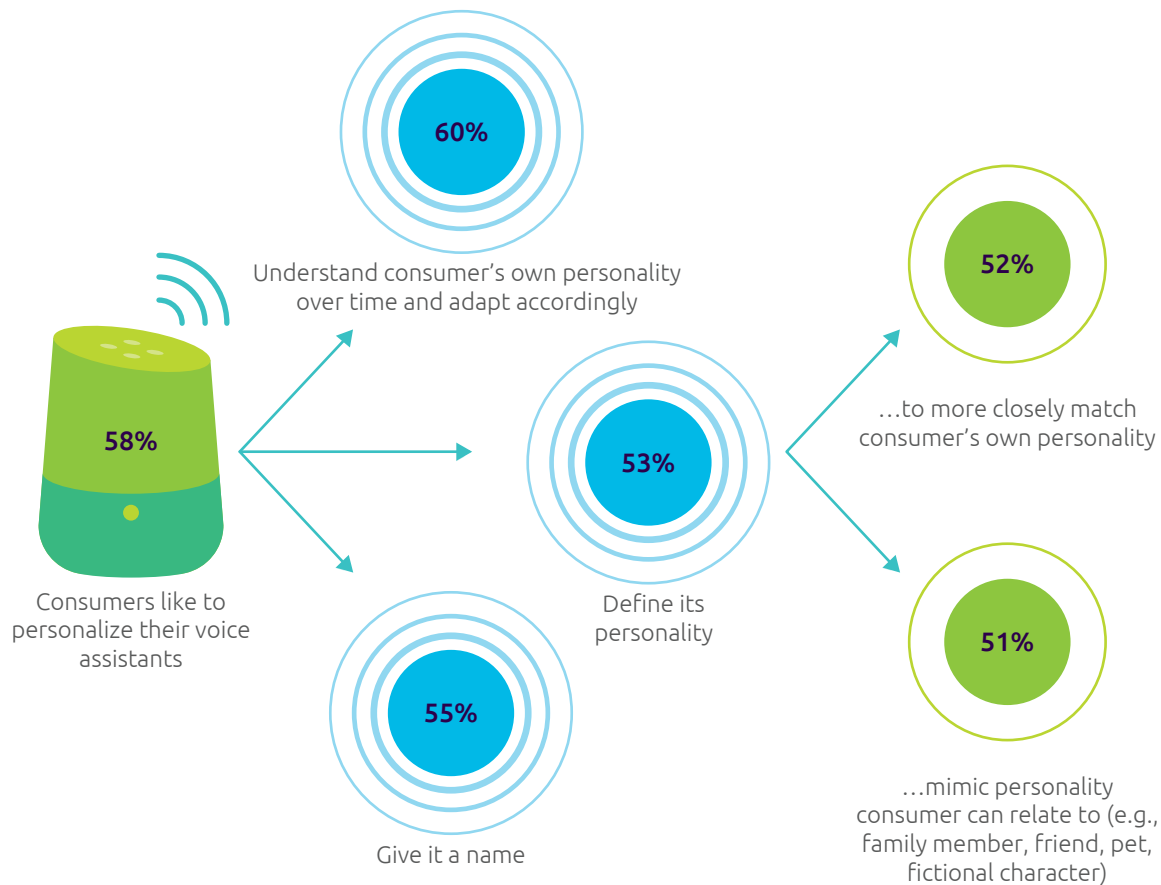
Source: Capgemini Research Institute, *Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 5,037 consumers using voice assistants (consumers from US, UK, France, and Germany only); Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives, 2018.*

## More than half of consumers say yes to voice assistant personalization

Capgemini research on the role of artificial intelligence in the customer experience, “The secret to winning customers hearts with artificial intelligence,” showed the power of humanization. We found that nearly half of consumers would display greater loyalty for a company – and show a higher propensity to spend – if their interactions with AI were human-like.<sup>20</sup> As the use of voice assistants proliferates, it will become increasingly important for voice to have a persona and become more life-like. An added element of fun and engagement will be necessary to boost consumer experience and satisfaction.

According to our survey, 58% of consumers would like to personalize their voice assistant. Figure 7 shows that over half of consumers (58%) want to give the assistant a name and define its personality. For organizations, the opportunity lies in allowing consumers to make these decisions within the realms and choices of their own brand tone and style. *“Once people have found utility in a voice-enabled product, they may want to personalize further it by naming it or defining the kind of personality they’d like it to have,”* says Michael Zagorsek, VP, Product Marketing at Soundhound Inc., developers of the Houndify voice AI platform. The voice assistant of Chinese automotive, FAW (First Auto Work), can be personalized between three different characters, including two human personas and a robot persona.<sup>21</sup>

**Figure 7.** More than half of consumers say yes to personalization, global data



Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 10,254 consumers using voice assistants.

Interestingly, people are getting increasingly comfortable talking to their voice assistants as they would to a fellow human being:

- 42% said they are more comfortable discussing personal details and issues with a voice assistant than with another person or friend
- 46% said they are comfortable talking to a voice assistant in the same way they would talk to another person or friend

## Consumers have started to trust their voice assistants for product advice and recommendations

Consumers are moving beyond using voice for entertainment and functional activities such as asking for directions or

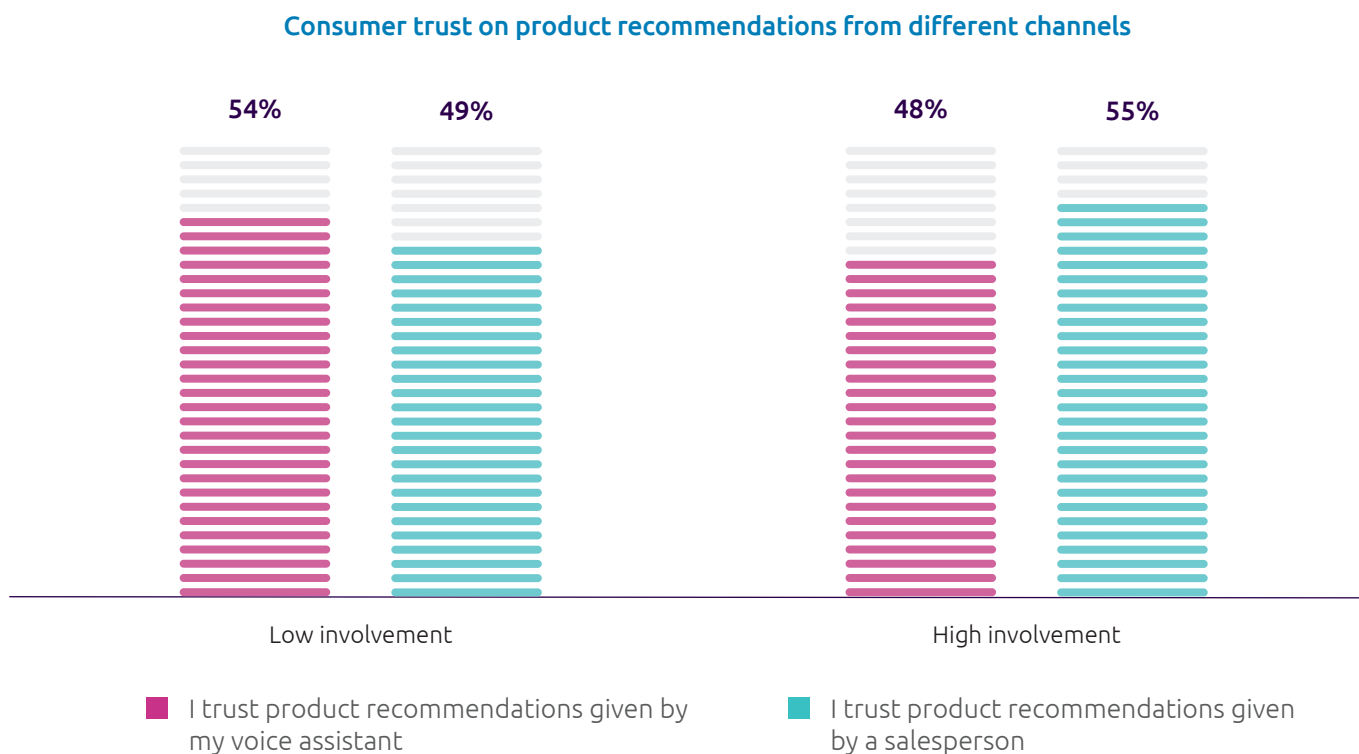
checking the weather. Traditionally, consumers reached out to salespeople or online forums for advice on products. Today, consumers are starting to reach out and trust their voice assistants for product recommendations.

In Figure 8, we look at two types of interactions:

- First, low-involvement interactions that require a small number of questions to an assistant to get to a resolution
- Second, high-involvement interactions that require a sizeable number of questions.

As we can see, consumers trust voice recommendations over a salesperson's for low-involvement interactions. However, when it comes to high-involvement, consumers would rather trust the advice of a salesperson.

**Figure 8.** Consumers are starting to trust voice assistants with product recommendation, global data



*Involvement level is defined by the number of questions exchanged with the assistant to get a resolution.*

Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 10,254 consumers using voice assistants.

## Half of consumers are worried about voice assistants listening to them in the background

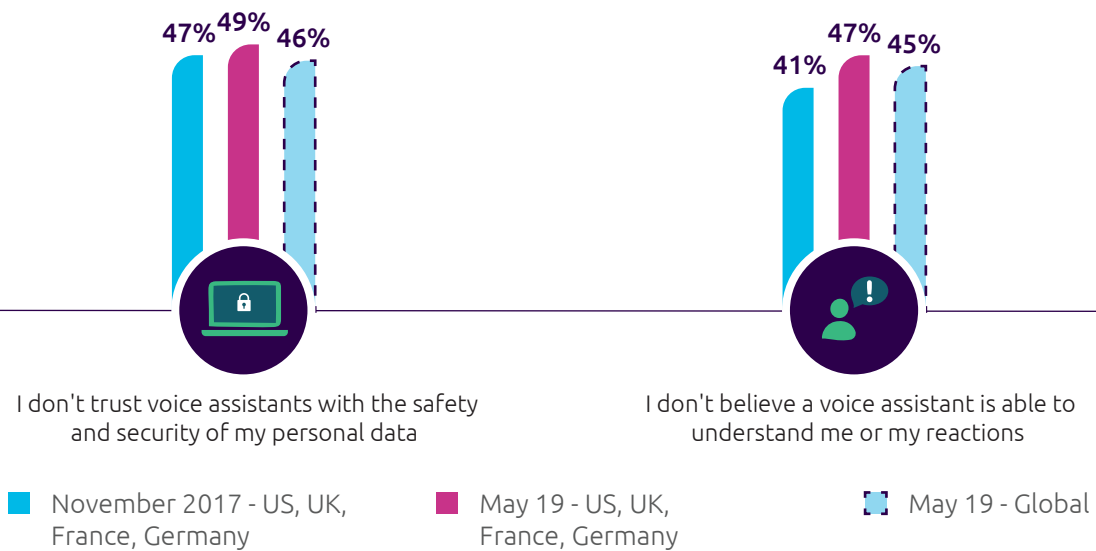
Consumers are concerned about the “passive listening” of their voice assistants and the added privacy risks. According to our survey, 52% are worried about their voice assistants listening in the background to their private conversations. As a result, the perceived security of personal consumer data is in the spotlight and is a major concern among voice users. As Figure 9 shows, safety and security of data is still a concern for nearly half of the consumers. They also do not believe that voice assistants understand their reactions.



**Consumers are showing greater concern regarding the safety and security of their personal data**

**Figure 9.** Nearly half of the consumers are concerned about the safety and security

### Consumer concerns with the use of voice assistants



Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 5,037 consumers using voice assistants (consumers from US, UK, France, and Germany only); Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives, 2018.

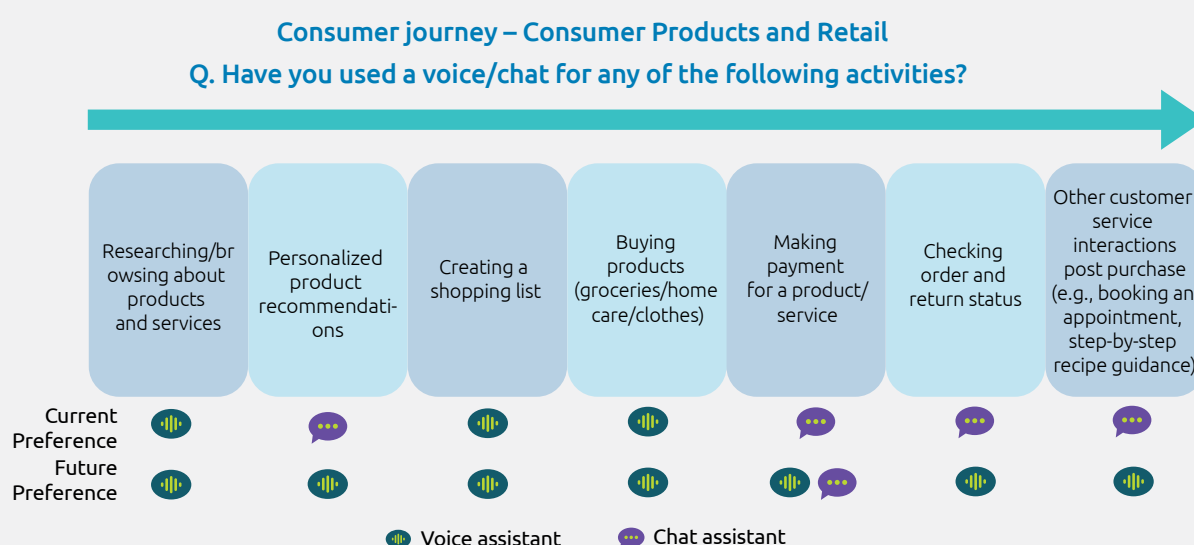




# Consumer Products and Retail

## In the future, voice matters most to consumers

We wanted to understand how consumers rate their experiences for voice and chat and what medium they prefer using today to the one they see themselves using in the future. We asked them to rate their experience across seven activities – from researching products to checking order stats – and whether they would be using voice or chat in three years' time. As the chart below shows, voice emerges as the dominant medium.



Looking ahead to 2022, for each activity across the consumer journey, the consumer uptake of voice is expected to increase by 15 percentage points or more compared to today's levels.

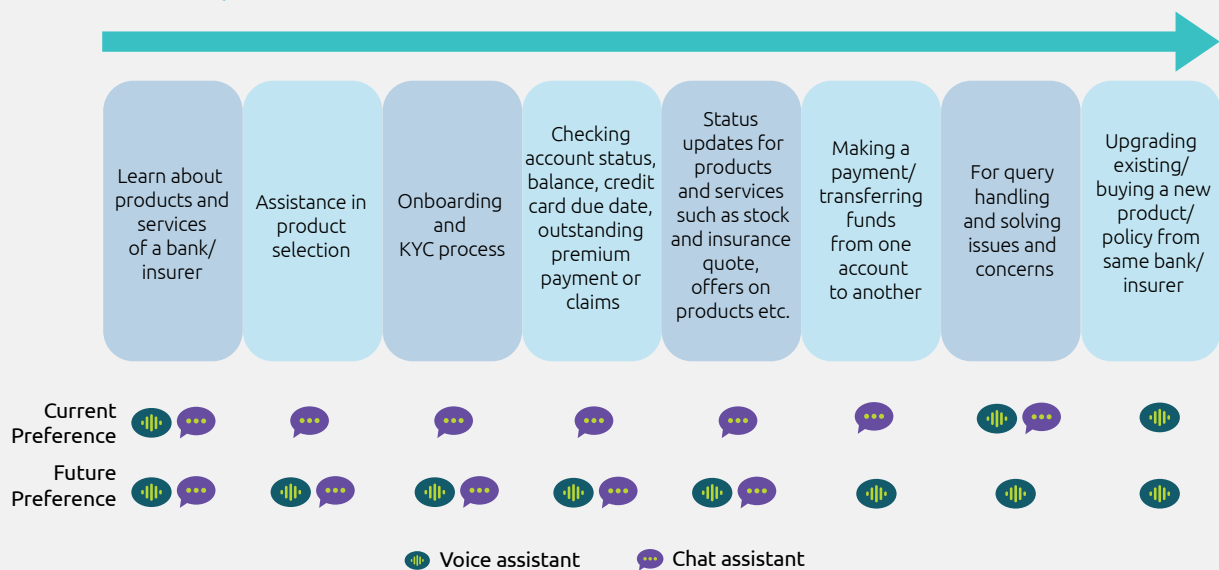
## Retailers leading the way in voice

- During the December 2018 holiday season, Swedish retailer H&M's voice capability allowed consumers to browse their entire gift catalogue and order through voice assistants.<sup>22</sup>
- Customers of Dutch-based Albert Heijn can now manage their shopping lists through voice assistants. Consumers can add or remove items, indicate the number of items, and even make the voice assistants read back the shopping list. The voice assistant-generated shopping list can also be used directly in store or for online ordering.<sup>23</sup>
- By saying "Uniqlo IQ" or "Uniqlo FAQ," users can interact with Uniqlo's voice assistants on stock availability or shipping times for their online orders.<sup>24</sup>
- The customers of German-based online retailer OTTO can interact with their voice assistants on a range of queries, from sales to recent campaigns.<sup>25</sup> *"We are convinced that voice-steered interaction will change e-commerce..."* said Marc Opelt, member of the OTTO Management Board, Marketing and OTTO spokesman. *"...We see great potential in voice commerce and intend to trial this technology as a further touchpoint that makes it even easier for our customers to interact with OTTO."*

# Retail Banking and Insurance

## Consumer journey – Retail Banking and Insurance

Q. Have you used a voice/chat for any of the following activities?



## Consumer preference will shift to voice in the coming three years

As the above chart shows, consumer preferences in this sector will change significantly between now and 2022. Today, chat dominates, as most financial services organizations have chat assistants as their predominant customer offering. However, there will be a marked shift towards voice in the next three years.

## Banking and insurance firms leading the way in voice

- BBVA Spain lets customers use voice assistants to send money, find their nearest ATMs, and understand what banking products are available.<sup>26</sup>
- US-based financial services organization, TIAA, uses voice interfaces to offer customers tax statements, get stock market quotes, and find their nearest insurance advisor. Future plans include providing personalized financial information, daily market briefing and information about their products.<sup>27</sup> *"We understand that individuals are looking to check in on their financial lives while they're 'on the go' and at moments that are most convenient to them,"* said Scott Blandford, TIAA's chief digital officer. *"By extending our reach through new technologies and new customer service features, we're looking to integrate their financial lives into their daily lives by meeting individuals on the devices that they're already using regularly."*

# Organizations are already realizing significant benefits from voice and chat assistants

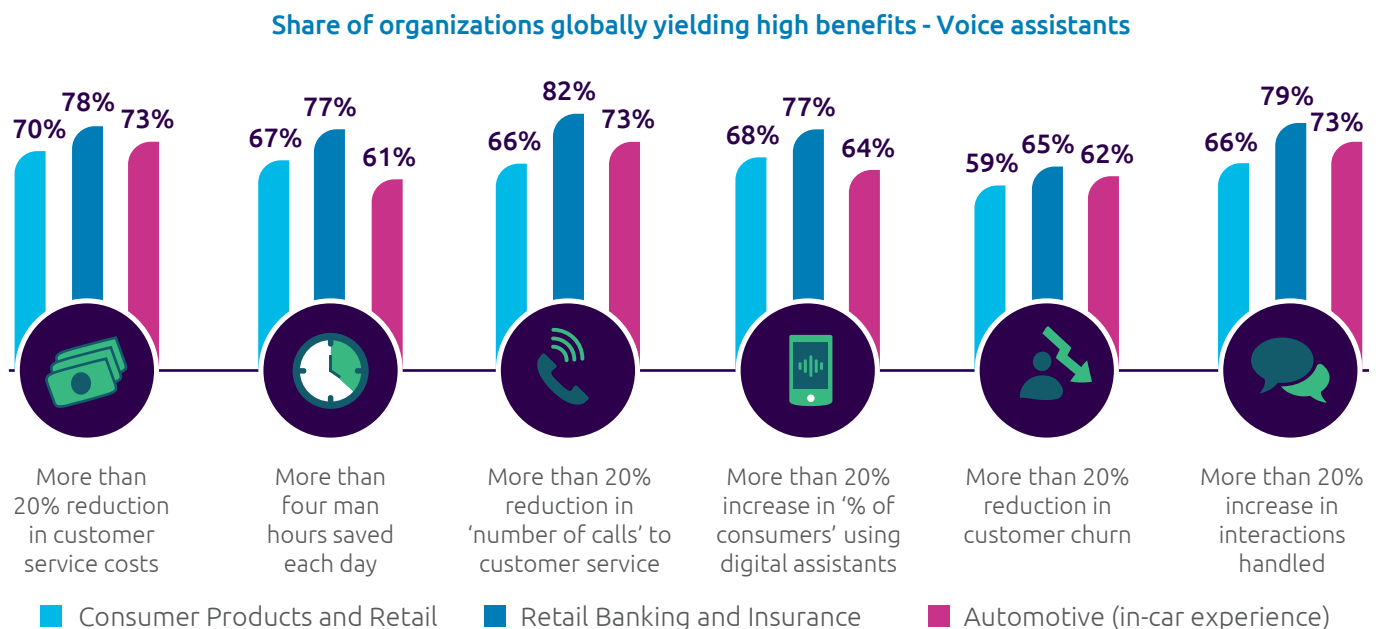
*"You don't have a conversational interface because you want a conversational interface. You want it because you want to reduce costs. You want to increase revenues; you want to delight your customers or solve some specific business pain point,"* says Ken Herron, chief marketing officer, UIB, a company specializing in conversational AI and voice and chat technology.

Our research found that over three-quarters of organizations (76%) have realized measurable benefits from voice and chat assistants. In addition, on average, 58% said that benefits met or exceeded expectations. Benefits range across operational improvement to customer experience and we look at these two dimensions in more detail below.

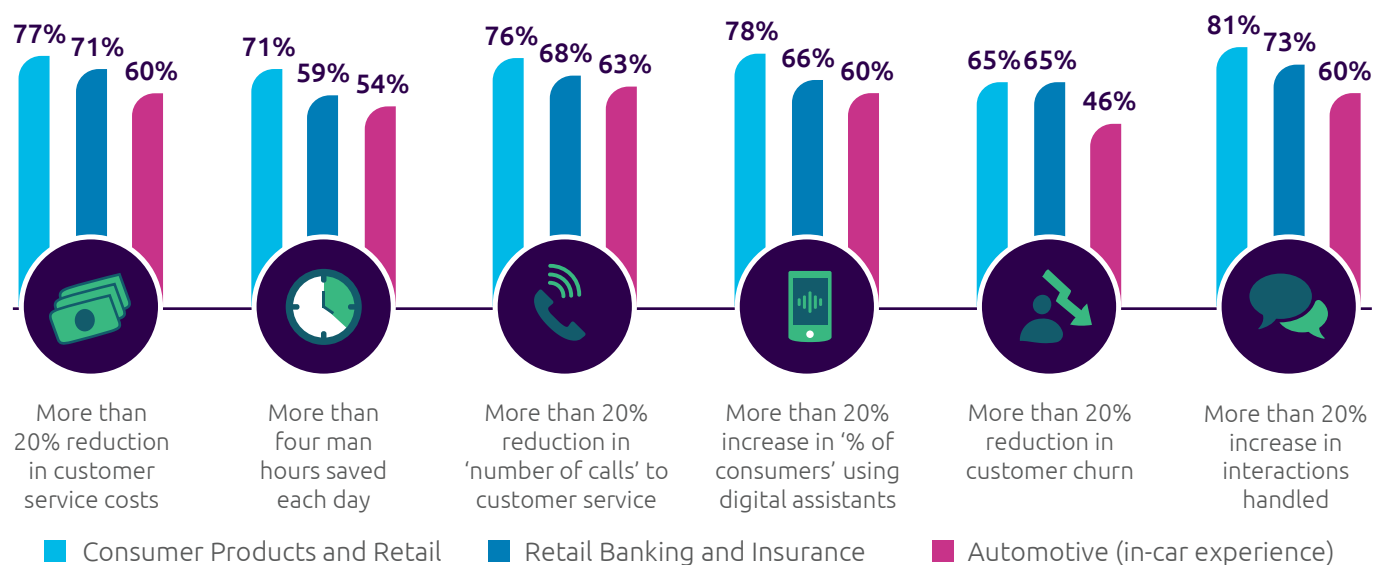
## Significant operational benefits and improved efficiency

As Figure 10 shows, many organizations – across different sectors – are driving significant benefits, from cutting service costs to driving down customer churn. Both voice and chat solutions, for example, have led to many organizations reducing customer service costs by more than 20%.

**Figure 10.** Large share of organizations globally are yielding high operating benefits



### Share of organizations globally yielding high benefits - Chat assistants



Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 executives.

Conversational interfaces have helped organizations make more efficient use of human team members and generate efficiencies. *"The time to resolve a query or to give a response back has reduced drastically, because it is automated at first level,"* says a senior executive from one of India's large private sector banks. *"And, with the increase in our customer base, there is obviously an increase in the number of queries we receive. However, we didn't have to scale up our teams."*

Eric Turkington, VP, Strategic Partnerships at RAIN, a company specializing in voice technology and conversational AI, believes that there is a significant opportunity for those with significant customer-facing call centers. *"I certainly think customer service is a major benefit area,"* he says. *"Companies that spend a lot of time staffing call centers, which often deliver subpar customer experiences, are looking to voice to triage some of that call center volume. Some of the brands that we're working with are very excited about the possibility of saving costs and time on the customer services side."*

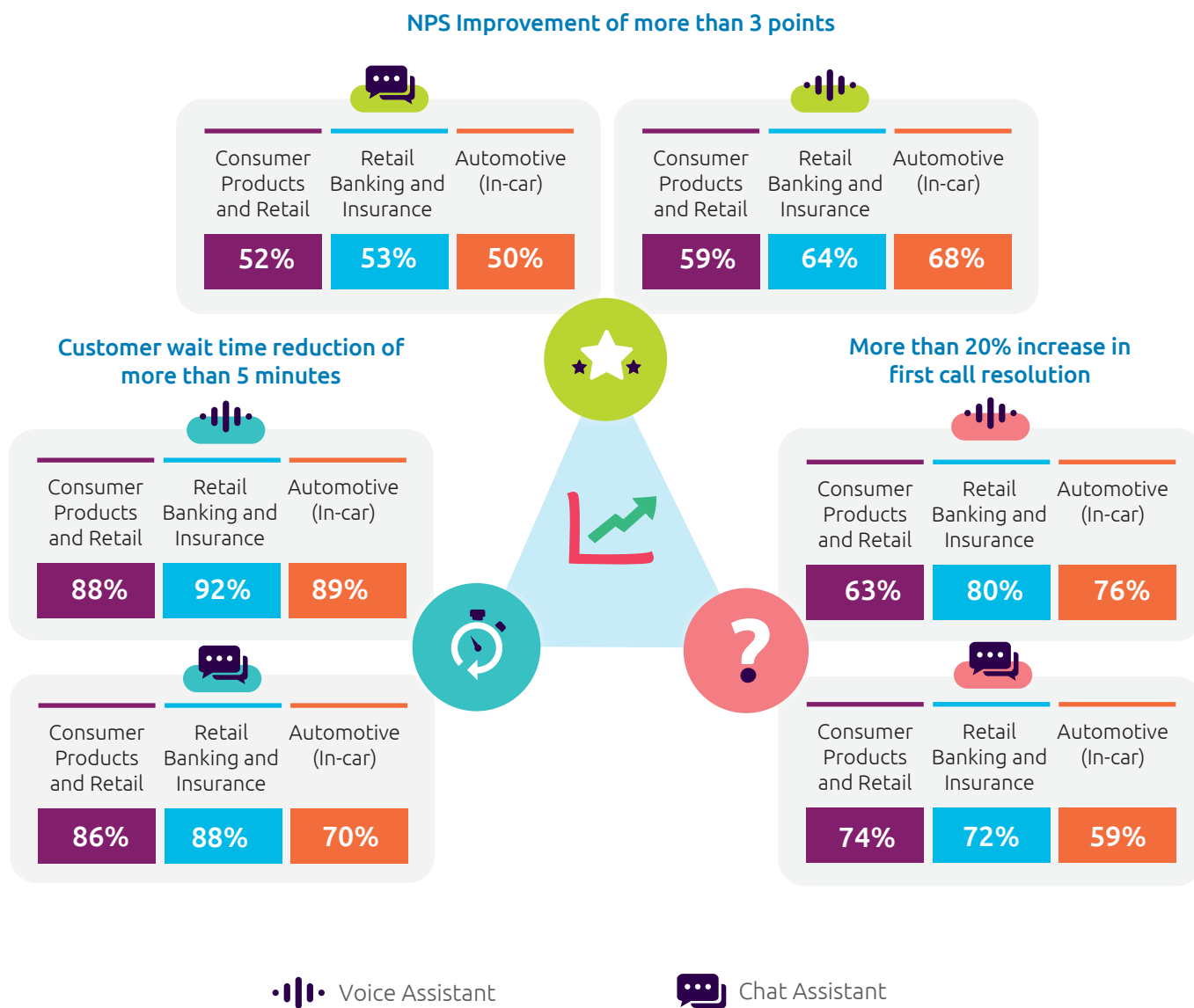
Assistants have also had a positive impact on the topline. This can come not only from allowing organizations to handle more customers, but also from using voice assistants to create the insights that fuel new product development. RAIN's Eric

Turkington outlines how a consumer products firm used voice listening to develop new product ideas. *"We worked with a leading global consumer goods manufacturer on a voice application where consumers could ask about stain removal, from 'how do I get grass stains out of sneakers' or 'how do I get wine out of upholstery?',"* he explains. *"We started to see that there may be consumer demand for dedicated new products. This is a good example of the power of listening via voice."*

## Enhancing customer satisfaction and the customer experience

All organizations surveyed say they have seen Net Promoter Score® (NPS) improvement as a result of voice and chat assistants. Organizations have successfully used conversational assistants to improve customer experience and increase their satisfaction levels. As Figure 11 shows, many have also seen a significant increase of more than three points. In retail banking and insurance, for example, 64% have seen this sort of sharp rise.

**Figure 11.** Customer satisfaction on the rise for many

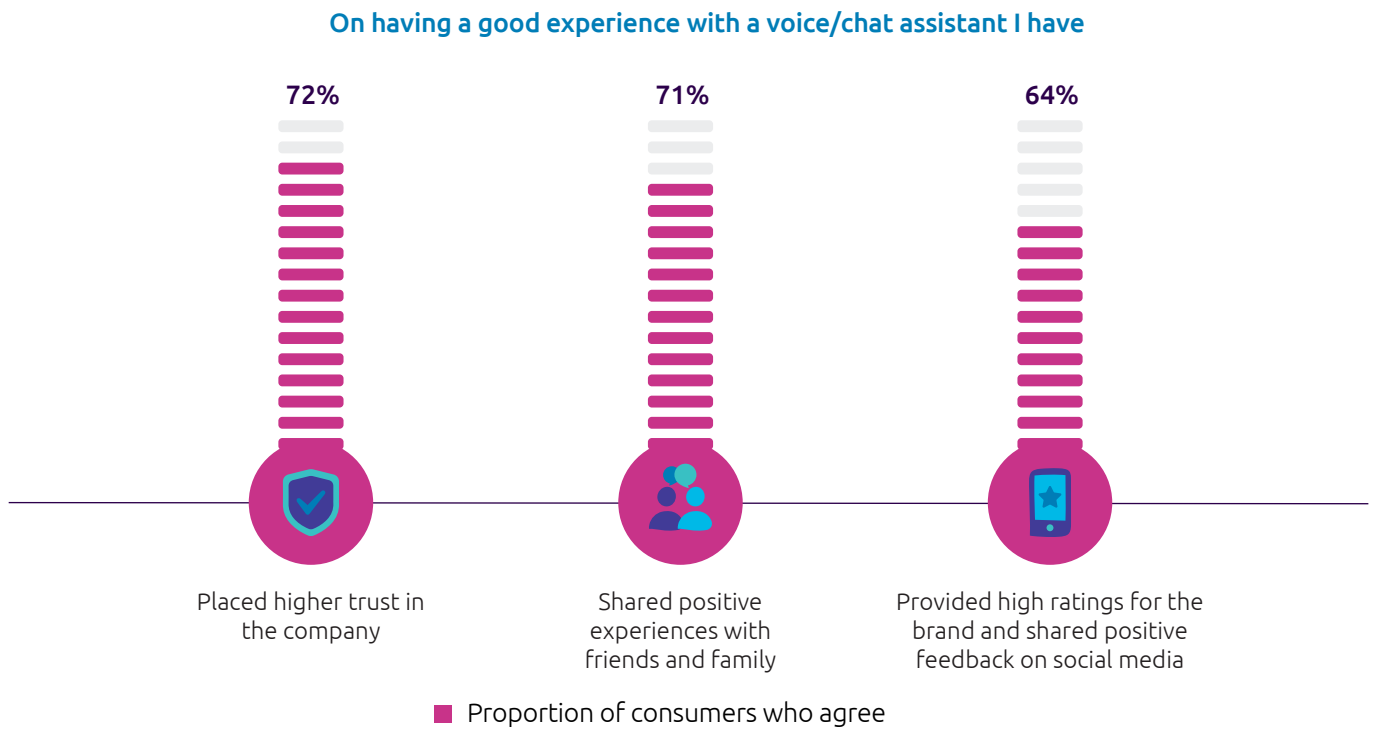


Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 executives.

These solutions can also enhance the customer experience by reducing delays and improving responsiveness. Talking about how their clients benefitted, Ken from UIB, says, “*Customers’ wait times were minutes-long. Now, there is effectively zero wait*

*time. The chatbot responds instantly to customers’ enquiries.*” We also found, as Figure 12 shows, that a positive conversational experience can drive greater customer engagement, from trust to championing a brand.

**Figure 12.** A positive experience will drive positive customer engagement





Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 12,247 consumers using voice/chat assistants.

Our section below, 'Conversational interfaces in action,' provides further real-life examples of how organizations are driving value and returns.



**Brands providing a good experience with their conversational assistants are driving higher levels of customer engagement**

## Conversational interfaces in action: benefits realized

		
<b>Consumer Products and Retail</b>	A typical shopper at the UK retailer, Morrisons, uses its voice platform three to four times a week. <sup>28</sup>	<ul style="list-style-type: none"> <li>• “Corti.Bot,” the gift-recommendation robot of Spanish retailer El Corte Inglés, recommends online gifts to its users. It has registered nearly 200,000 interactions in its first weeks of launch, with an average of 2,000 recommended products per hour.<sup>29</sup></li> <li>• Marks &amp; Spencer’s website-based virtual assistant helps customers use discount codes correctly, driving \$2.5 million in sales.<sup>30</sup></li> </ul>
<b>Automotive</b>	BMW says it has seen increasing customer traction for its voice assistant. <i>“I’m a big believer in voice and we are finding that you can drive really high consumer engagement with it ... we’re already seeing today that voice commands are getting pretty high usage,”</i> says Dieter May, head of Digital products and services and digital customer interface at BMW. <sup>31</sup>	Kia Motors launched its chat assistant “Kian” to provide a direct source to all the information that users might need when purchasing a car. At a conversion rate of 21%, Kian received three times more conversions than Kia’s main website. <sup>32</sup>
<b>Retail Banking and Insurance</b>	Bank of America’s virtual assistant, “Erica,” which offers voice, chat, and gesture capabilities, reached one million users in three months. Consumers predominantly use it for searching their spending history and to obtain account balances, account numbers, and bill payment details. <sup>33</sup>	“Xiaowei,” the chatbot of the Chinese Construction Bank, can understand 600 different versions of one question type and handled 1.9 billion customer interactions last year. <sup>34</sup>

## Less than 30% of organizations master in conversational interfaces and reap greater benefits

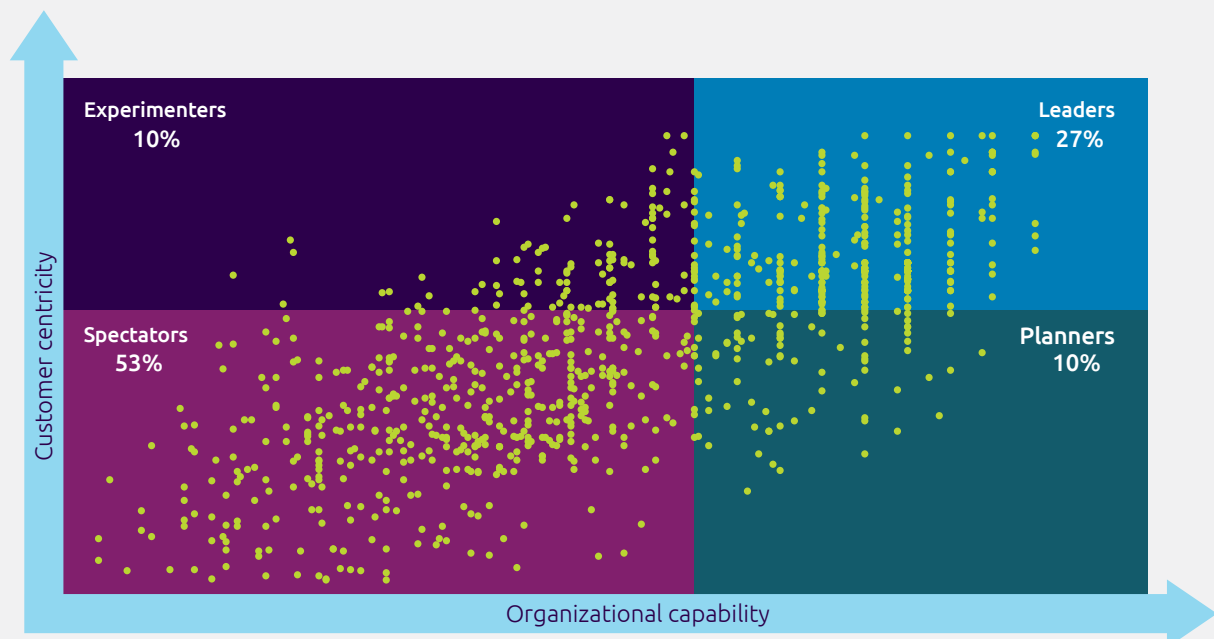
We analyzed our surveyed organizations to understand their conversational interface maturity, looking at two dimensions of a company's assistants:

1. Customer centricity, such as:
  - General capabilities
  - Transparency (whether there are frameworks to address biases)
  - Personalization (whether they can understand consumer preferences and provide personalized suggestions)
  - Social norms (ability to understand human slang, conversational norms, etc.)
  - Skillsets (such as a framework to rectify errors).
2. Organizational capability, such as:
  - Employee awareness of conversational assistants
  - Strategy for these interfaces
  - Organizational structure (appropriate and open business processes that encourage adoption)
  - Training programs for employees on conversational interfaces
  - Enterprise data and system integration.

Based on these factors we have grouped the organizations into four categories, as Figure 13 shows:

1. Spectators – low maturity on both organizational capability and customer centricity (53% of the sample)
2. Planners – high maturity on organizational capability but not on customer centricity (10%)
3. Experimenters – high maturity on customer centricity but not on organizational capability (10%)
4. Leaders – high maturity on both organizational capability and customer centricity (27%).

**Figure 13.** Less than 30% of the organizations show maturity in both customer centricity and organizational capability



Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 executives.



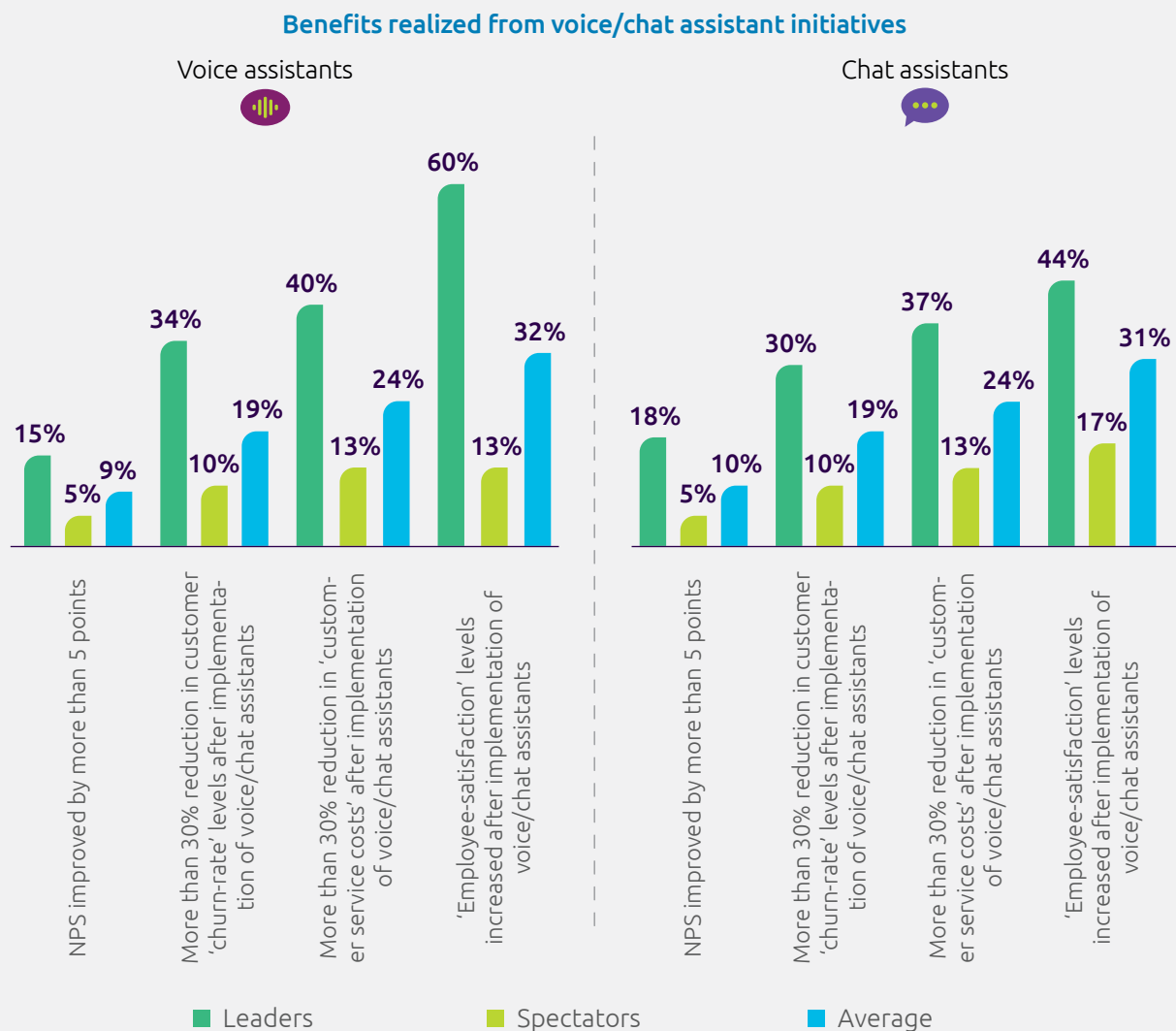
We found that this mature, leading cohort has secured significantly more benefits than the others:

## Leaders are better placed to realize benefits from voice/chat initiatives

As Figure 14 shows, Leaders are more likely to generate benefits than the major Spectator group (53% of the sample) as well as the overall average. For example, 60% have seen employee satisfaction increase. But this drops to 13% for Spectators and 32% on average.

For instance, Prudential plc, in Hong Kong, has reduced claims processing time from nine days to 2.3 seconds by coupling its AI system with a chat assistant.<sup>35</sup>

**Figure 14.** Benefits realized from voice/chat assistant initiatives



\*Percentages shown are for high involvement where involvement is defined by the number of questions exchanged with the interface to get a resolution.

Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 organizations, N=273 leaders.



## Perspectives on chatbots and voicebots

### Q&A with Unilever's Stan Sthanunathan, executive vice president – Consumer and Market Insights

#### Will chatbots replace humans completely?

I don't think chatbots are there yet in terms of providing better quality answers in a chat. They can provide a faster response, but faster is not necessarily always better. Therefore, we are using it *in conjunction with* humans as opposed to *in place of* humans.

#### How do you design KPIs for bots?

We don't look at bot-specific KPIs versus human-specific KPIs. But, at the end of the day, what net outcome is delivered? Is the customer leaving the experience satisfied or not? That is the only thing that matters. We know what the different markers in the customer journey are and, along with those markers, how the overall customer satisfaction has improved. That is the key KPI that we use. And we have seen customer satisfaction improving. But would I ascribe it only to bots? I would certainly not do that, because there are too many other variables at play.

#### What are some early lessons from bots?

When we deployed all the pilots, we were probably on the overcautious side, so we were monitoring the answers from the bot. Initially, we were monitoring the answers with the objective of figuring out how to make that bot a learning bot. But later, we said, *"okay, we do need to teach the bot to get better and better, but at the same time, we also need to ensure that we prevent stupid answers going out."*

“

So, one of the things that we have deployed at scale, thanks to the standard global call center handling platform, is always having a bot augmenting a human. So, when a question comes in on a digital chat, the bot immediately goes back to our database, picks up three or four possible answers, and goes to the operator and says, “pick and choose the one that you think is the most appropriate for the situation.” And they pick and choose one and then maybe do a quick edit and then they push it out.

That reduces the response time quite significantly. And the moment the answer is pushed out, as it’s a closed loop system, the bots start feeling that this was the right answer for the question. So, the recommendation engine behind the bot, and the kind of answers that the human needs to give, get better and better with every passing month. But at the same time, we always make sure that it is served to the operator and not to the consumer. Sometimes, when you know the question is straightforward, then we let the bot take over. But, again, that is a decision that the operator would make in most cases.

#### What is holding chatbots back?

I think one big factor is that the people who are developing the chatbot technology are focusing way too much on the technology part, but much less on the application part. Deployment, and understanding the environment it is being deployed in, are key to making it successful. But I don't think people are thinking enough about that. Each chatbot gets better if it is trained properly. And there's no better person to figure out how to train it than the person who created the chatbot. And that is something that doesn't happen because I don't think the tech guys who created the chatbot have patience to deploy it at scale. They want to move on to the next tech development and not be bothered about the dirty job of deployments.

#### What is the future of voice and chat bots?

I would like to believe that voice is going to take over faster than chatbots because it is much more natural. Of course, voice has got its own limitations in terms of its ability to understand different accents. But, given the pace at which voice technology has evolved, I believe it might work better than chatbots per se. Unless some fundamental shift in developmental efforts happens on chatbots, I think they will be bobbing along the surface of the water, but not really riding any big waves. Given the pace at which Google and Alexa are deploying all the voice-enabled devices, if they throw their weight behind it, it might actually do a pretty good job.

”

# How can organizations make the most out of the opportunity?

## Bring a right balance between human and robotic interactions to drive greater engagement

Previous Capgemini research on AI in the customer experience<sup>36</sup> clearly laid out the case for humanizing machine interactions. We found that nearly 64% of consumers want AI to be more human-like. When it comes to conversational interfaces, the same logic holds.

Companies are meeting this need by building strong connections between their bots and customer-facing employees. Google recently confirmed that:

- About 25% of the calls placed through to its AI-based voice assistant, Duplex, started with a human.
- 15% of the calls that began with an automated system had a human intervene at some point.<sup>37</sup>

Stan Sthanunathan, executive vice president at Unilever, echoes this need for human-bot partnership. *"I don't think the chatbots are there as yet in terms of providing better quality answers in a chat,"* he says. *"They can provide faster response, but faster is not necessarily always better. And, therefore, we are using it in conjunction with humans as opposed to in place of humans."*

This shows the importance of the human touch, where interactions are personalized, contextualized, and relevant. Achieving this requires a connected organization; dialogues need to connect to enterprise systems and customer data. It also requires intimate customer understanding, such as knowing how consumers feel about different tones of voice.

And, as we have seen, organizations need to establish how human employees and bots augment each other. Persisting with a conversational interface when the conversation requires a human will likely cause significant brand damage. Using conversational assistants in conjunction with human agents can be a win-win for all. Human agents can "grade" the performance of the assistants and continually improve bot performance.

Michael Zagorsek from Soundhound Inc. highlights the importance of having a dedicated strategy for voice, *"We've been saying that every company should have a voice strategy. If they don't already know how to take advantage of voice, then they've already fallen behind. And when they eventually realize they need a voice solution, they won't necessarily know how to proceed."*

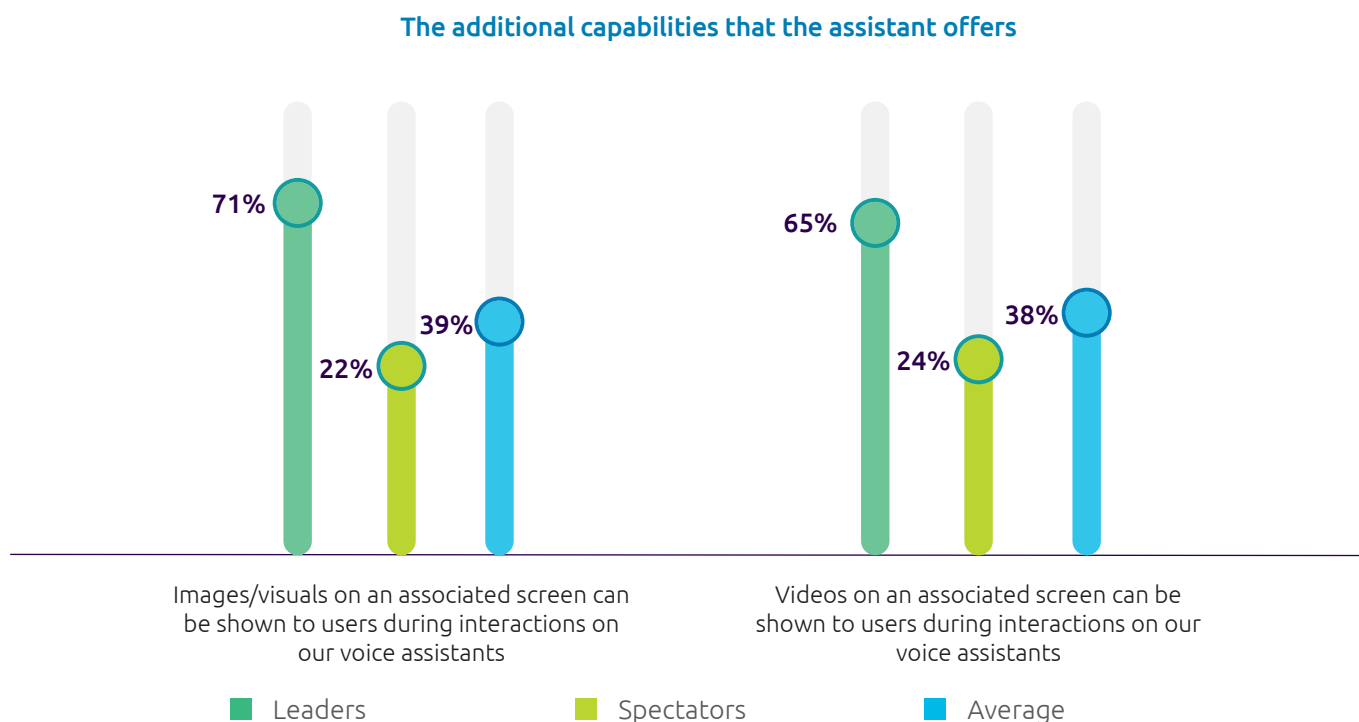
## Enrich the conversational assistant experience with features such as videos or images

Customers are clear that they value supporting information. Nearly two-thirds said that their experience would be enhanced by a range of additional information provided on-screen, such as images (selected by 63% consumers), videos (64%), more textual information (65%). And, as Figure 15 shows, the majority of leaders are already providing these functionalities.



## Consumers want a more human-like interaction with their conversational assistants

**Figure 15.** Leaders offer functionalities beyond the basic features for their assistants



Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 organizations, N=273 leaders.

The conversational assistant of Mercedes-Benz, “Ask Mercedes,” helps drivers explore in-car functions and features with text, images, videos, and website links.<sup>38</sup> MetLife’s chat assistant for India educates users about critical illness with interactive videos.<sup>39</sup>

Organizations should use conversations as a channel for searching/navigating into multimedia brand content by connecting with the enterprise content management platform. Conversations can also be a vehicle for submitting images for recognition, as well as for identification or authentication.

Organizations should also consider using conversational bots as communications channel for marketers pushing marketing messages. It is important to bear in mind in this context that messages need to be personalized. If they are not, there is a high risk of rejection if messages are perceived as too frequent, irrelevant or impersonal.

## Build the right skill sets to succeed with conversational interfaces

Our multi-year research into digital transformation has consistently highlighted areas where large organizations struggle. In particular, along with culture, the standout challenge is digital skills. In order for organizations to succeed with conversational interfaces, they will need to develop skills along three key axes:

- Experience design – Building compelling conversational interfaces will require organizations to have experts that are well-versed in prediction strategies/models (next-best-action/next-best-experience) and specific machine learning/deep learning models training and management

- Architecture/Technology – Building conversational bots will require advanced technology platforms and the architects that design on them. It will entail acquiring skills such as AI services orchestration, next-best-action engines and specific machine learning/deep learning model lifecycle toolchain
- Legal/Compliance – Conversational interfaces, like its larger cousin artificial intelligence, is an area that is not highly regulated. As a result, companies lack guidance on areas like governance and controls, which could put them, and their customer, at risk. To minimize the risks of reputational and financial damage from a self-learning conversational interface going awry, organizations must hire or train talent with the required skills to understand and manage emerging ethical, governance, and compliance issues.

- Impact on customer trust (95% of leaders use this as a factor)
- Solving known consumer pain points (95%)
- Consumer preferences on the use cases (94%).

Steve Ellis, head of Well Fargo's Innovation Group, outlines how a focus on the customer experience drives the bank's chatbot approach. *"If done right, what's next is even more exciting: revolutionizing the customer experience from start to finish,"* he said. *"With the right data and analytics, we shift from the mindset of 'people like you tend to do this' to an experience based on who you are and what you want."*<sup>40</sup>

Organizations need to focus on the customer impact of use cases rather than making decisions based on factors such as return on investment. When choosing the use cases, organizations need to add measurement and feedback management into conversations, so they can measure the impact and capture the feedback of the customer.

## Put the customer at the heart of selecting use cases

Leaders stand out because they show a high degree of customer centricity at every step in designing a conversational assistant. When asked about the criteria used for selecting conversational assistant use cases, leaders put a premium on customer-related factors:



**With the right data and analytics, we shift from the mindset of 'people like you tend to do this' to an experience based on who you are and what you want."**

*- Steve Ellis, head of Well Fargo's Innovation Group*

# Conclusion

Consumers are becoming increasingly comfortable engaging with conversational assistants. At the same time, they are also developing clear expectations on where they want the bot to come in, when they want the human to come in, and for what sort of queries. When they are used in the appropriate situation, voice and chat assistants have significant potential to transform the customer experience landscape.

However, our research shows that many organizations do not have a mature approach to these technologies, lacking both customer centricity and organizational capabilities when it comes to deployment. As a result, they are missing the opportunity to build deeper, more valuable relationships with customers. Organizations must understand the evolving dynamic of where and when a consumer uses a conversational interface. Then, based on that knowledge, deploy the best combination of human and bot. They should build their consumer/brand relationships through conversational assistants on key pillars of transparency and value. Consumers

will happily trade personal information in exchange for value as long as their data is protected and the organization is transparent about how it is used. Another factor of increasing importance is understanding the role of ethics in the success of a conversational interface. Given the high-profile incidents that we have seen with self-learning chatbots that display biases, organizations need to ensure they bake in the right ethical principles right at the start of the design.

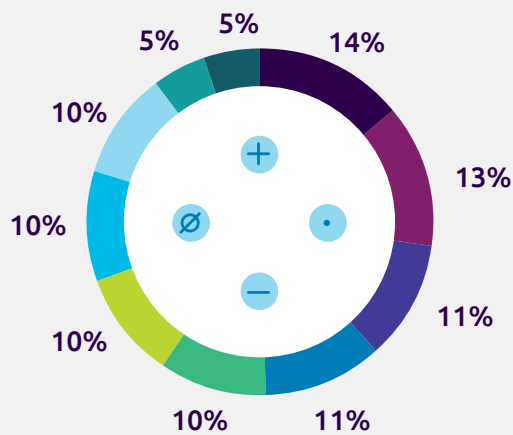
We are at the beginning of the conversational interface revolution. It is important to bear in mind that this revolution is not just about employing a new medium. This is about how being customer centric is key to delivering a superlative experience again and again.



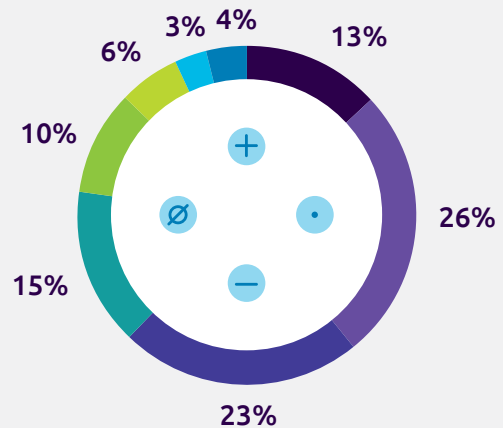
# Research Methodology

We surveyed over 12,000 consumers using voice/chat assistants for products and services in the Consumer Product and Retail, Retail Banking and Insurance, and Automotive sector.

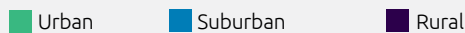
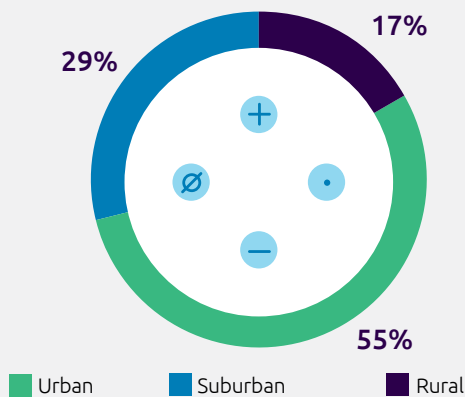
Consumers by country



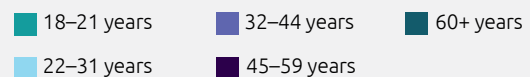
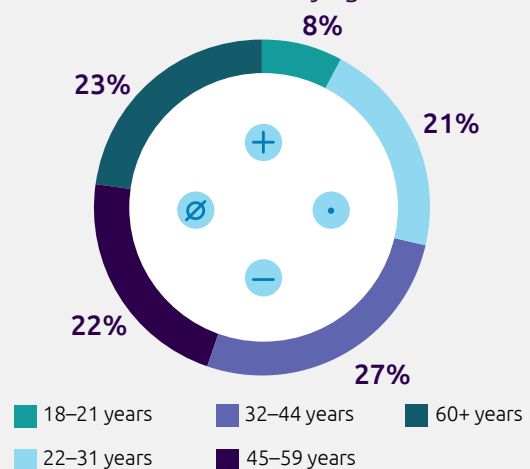
Consumers by income



Consumers by residence type



Consumers by age

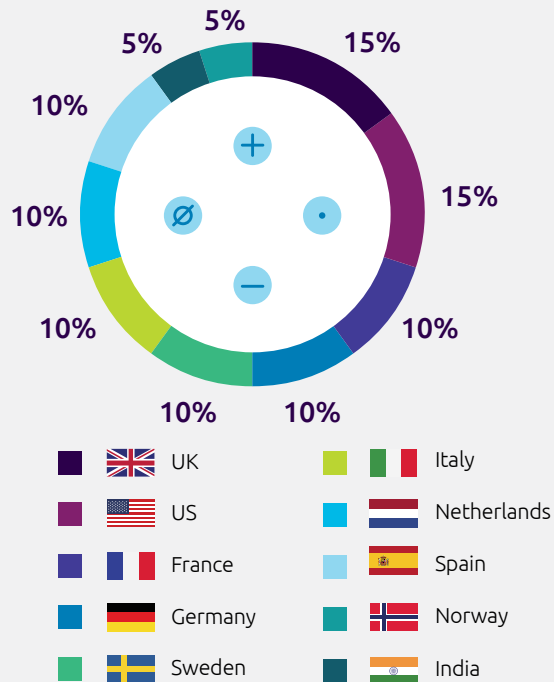


Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 12,247 consumers using voice/chat assistants.

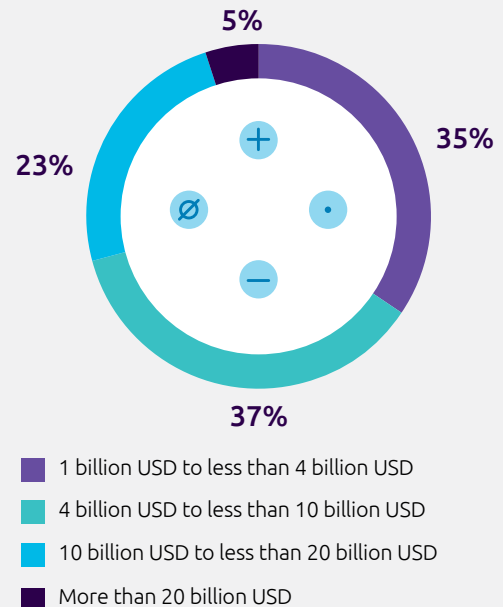


We also surveyed 1,000 executives from large organizations in the Consumer Product and Retail, Retail Banking and Insurance, and Automotive sector.

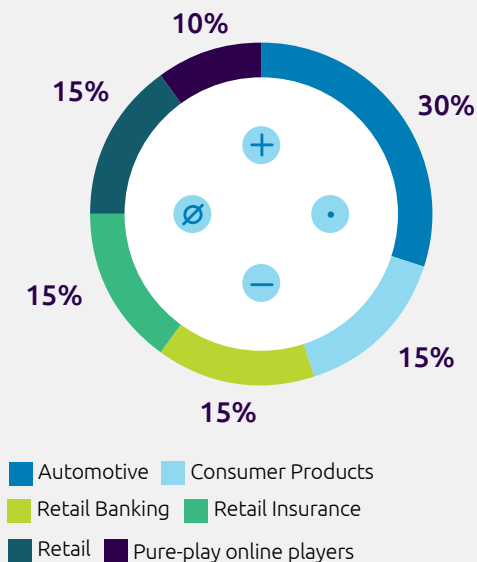
Organizations by country



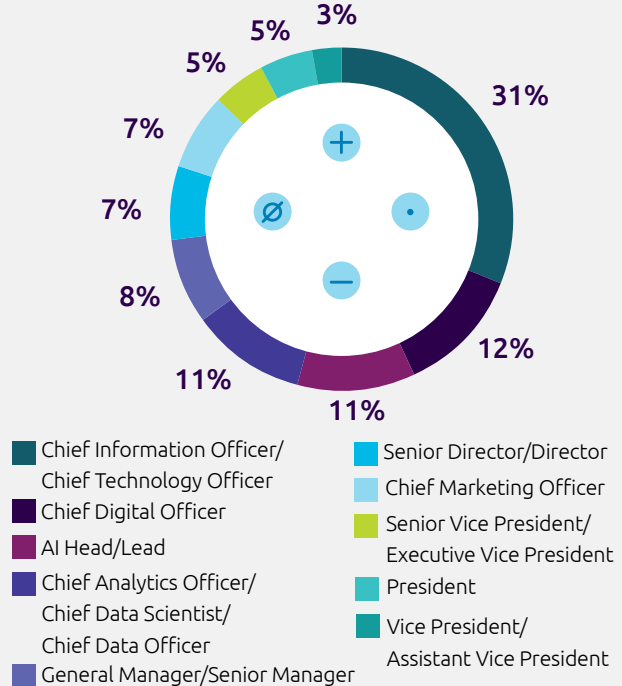
Organizations by revenue



Organizations by sector



Organizations by designation



Source: Capgemini Research Institute, Conversational Interfaces Research, Executive Survey, April 2019–May 2019, N=1,000 executives.

In addition to the above, we also conducted in-depth interviews with a few industry experts and companies providing voice and chat interface solutions.

# Appendix

## How do consumers use voice assistants?

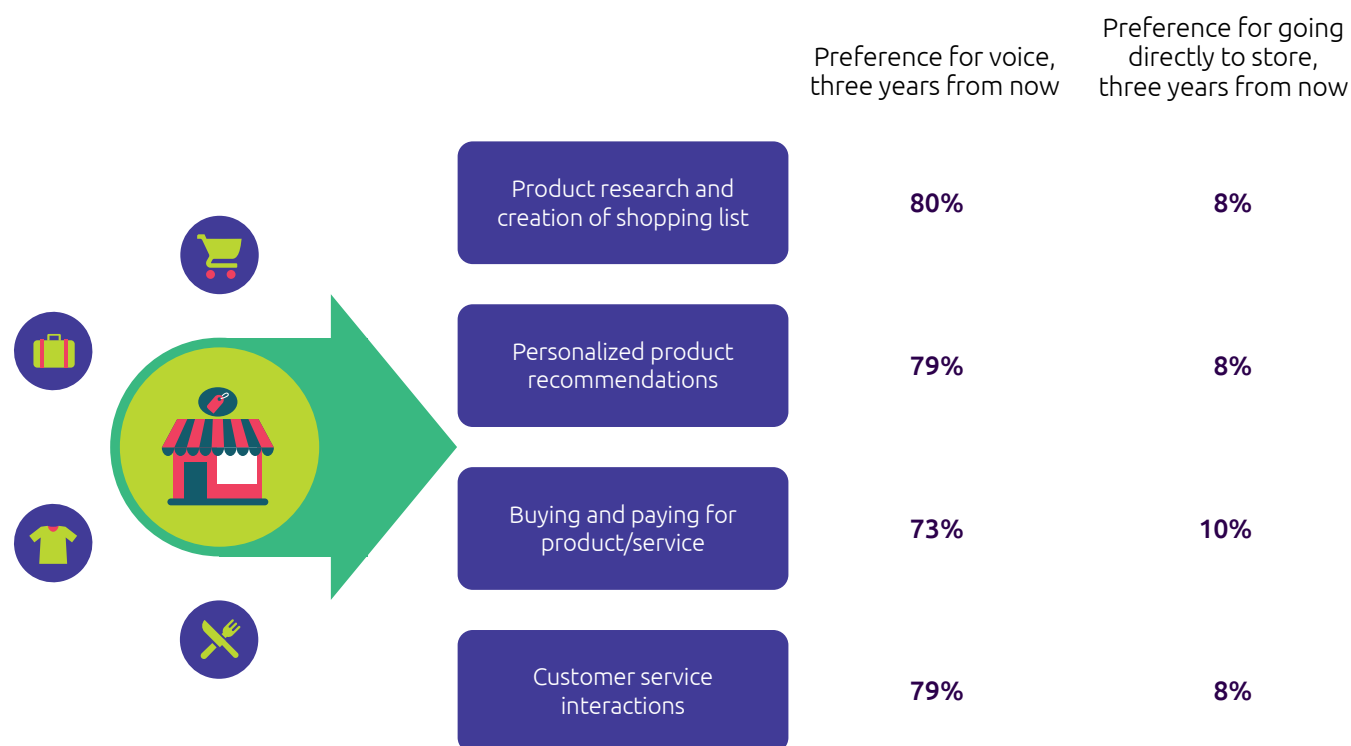
	November 2017 US, UK, France, Germany	May 19 US, UK, France, Germany	May 19 Global
Used it via a smartphone (e.g. Siri, Cortana, Google Assistant)	81%	76%	79%
Used it via a smart speaker (e.g. Amazon Echo/Google Home/Tmall Genie) that I own	25%	46%	40%
Used it via a smart speaker that I do not own	7%	11%	11%
Used it via a screen-based device (not phones) (e.g. iPad/Tablet, Amazon Echo Show/Amazon Fire TV)	21%	22%	21%

## Where do consumers use voice assistants?

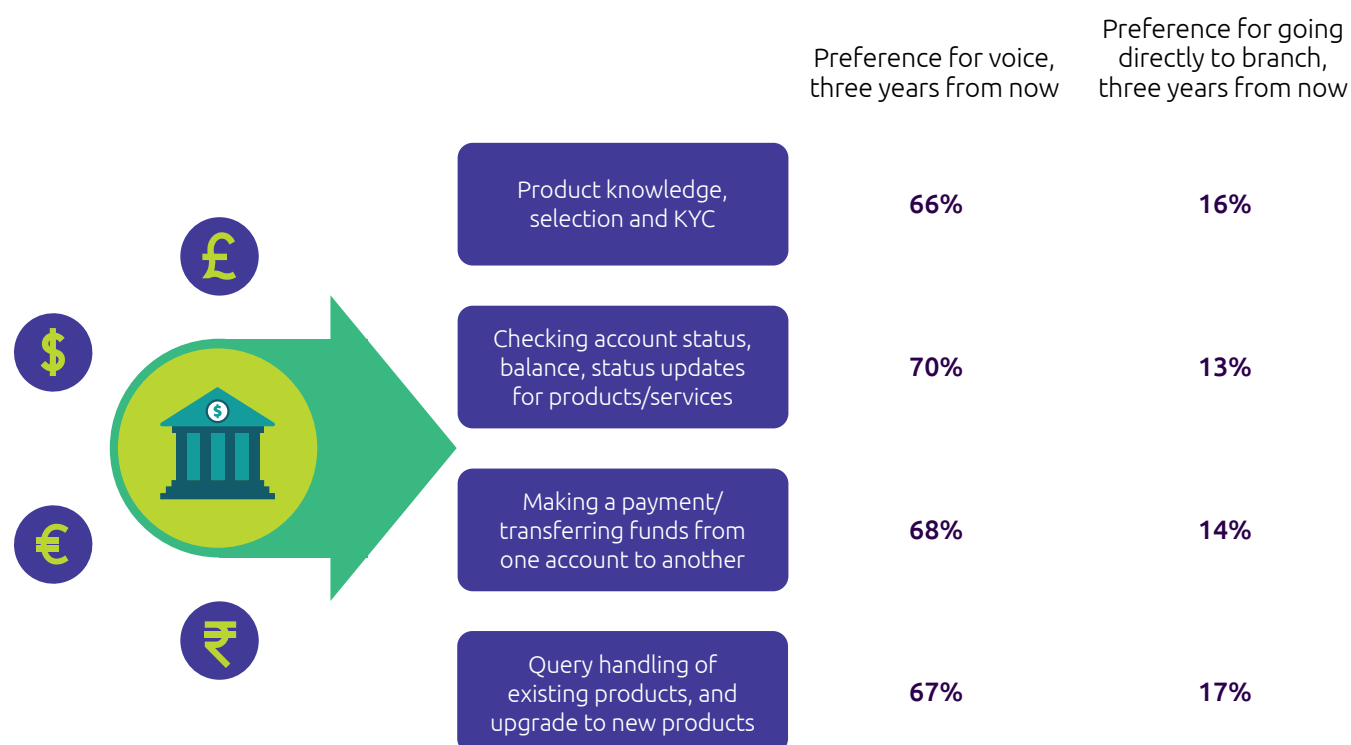
	November 2017 US, UK, France, Germany	May 2019 US, UK, France, Germany	May 2019 Global
Living room	69%	77%	76%
Kitchen	61%	73%	72%
Bedroom	50%	57%	59%
Bathroom	34%	44%	46%
Outdoors but around my home (e.g., terrace, balcony, garden)	51%	57%	48%
Outdoors, away from home (e.g., offices, parks, beach, riverside/lakeside)	44%	47%	50%
On the go (e.g., in my car, while biking, on the train)	59%	61%	62%

Source: Capgemini Research Institute, Conversational Interfaces Research, Consumer Survey, April 2019–May 2019, N= 5,037 consumers using voice assistants (consumers from US, UK, France, and Germany only); Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives, 2018.

### Consumer preference for voice assistants vs going to a store



### Consumer preference for voice assistants vs going to a bank/insurance branch



# Perform AI: Real-world solutions

## – AI for customer experience

*Infusing AI into digital customer platforms makes Customer Experience more human at a previously unimaginable scale – it's improving the quality of life for the individual customer and the employee.*

### Perform AI is Capgemini's unique approach, helping organizations realize the true value of AI

Customer experience is a strategic differentiator for companies and unquestionably drives business results, such as increased loyalty and revenue growth. The rise of AI has caused CX to take a giant leap forward and promises further progress and results. As AI continuously “learns” from the captured customer data, interactions, and feedbacks, it supports new uses, such as natural language-based interfaces, in-store/in-branch immersive experience, customer understanding, and customer engagement augmentation. This allows for not only streamlined operations, but also immersive and highly personalized experiences – a re-humanization of the customer experience!

### Unleashing the full potential of AI for CX

#### – defining essential use cases

Identifying and choosing the right use cases to deliver business value in a particular domain is essential for seizing new AI opportunities, so we've identified four interconnected application domains to enable the deployment and humanization of customer experiences:

**Customer understanding** – Use AI to continuously enrich and provide a holistic view of the customer with additional actionable insights (social personality traits, tone and sentiment towards the brand, behavior patterns, propensity to purchase/lifetime value) for increased individual and proactive engagement.

**Customer engagement augmentation** – A combination of repetitive tasks automation and machine learning-based predictions/recommendations aiming at augmenting employees during their customer-facing activities, as well as communicating relevant (individualized, customized, and real-time) propositions to customers.

**Conversational interfaces** – Beyond focusing on natural language processing for basic dialog or Q&A, think about extending the user experience to rich, contextual, and individualized conversations: deep connection with enterprise systems, data and knowledge, consumer sentiment and emotion detection, tone and gender adaptation, face or object recognition, and seamless employee participation in conversations when needed.

**Immersive experience** – A combination of vision, voice, and natural language AI enablers with immersive uses (augmented, virtual and mixed reality) aimed at enriching the user experience and interactions with products and services, all along the customer life cycle.

### Conversational Interfaces – identifying the business value

Global brands are ever more leveraging conversational interfaces to redefine the customer touchpoints. They use a combination of chat, voice, or any other natural language interface aiming at transforming user interactions into human conversations and humanizing the overall customer experience. There are six areas where conversational interfaces are driving business value for brands and customers:

**Simplify engagements with customers (seamless customer engagement)** – self-service, trouble ticket management, travel experience, and concierges

**Ease Voice/Chat workflows for personal assistance (employee in enterprise)** – payroll and leave, profile and employee management, travel expenses, claims management, and performance management

**Enhance acquisition with conversations (digital dialogue)** – branding websites, customer acquisition portals, information publishing

**Assist partner with smart conversations (dealer acceleration)** – quote management, audit and compliance, stock and inventory management

**Facilitate simple interactions (digital commerce)** – omni-channel B2C commerce, B2B commerce, product catalogues, and loyalty management

**Enhance productivity with conversations (employee on the move)** – CRM sales applications, audit and inspection, field-service applications, requests and approvals, and lifecycle engineering.

## Conversational AI – describing a maturity model

Companies are increasingly focusing on improving their overall AI capabilities and skillset; and they're starting by launching internal-facing AI initiatives. They're also looking to generate new opportunities using big data and existing AI capabilities for specific use cases. Conversational AI is one of the key areas that offers potential to drive significant business value for companies worldwide. Mastering conversational AI will enable them to deliver more contextual dialogs between people and brands, thus building more relevant and intimate relationships between the two. Primarily, there are two areas of maturity components that companies can use to determine their conversational AI maturity:

Taking an external look to determine maturity - Define the maturity components of AI bearing	Taking an internal look to determine maturity – Define the maturity components of organizational readiness
<b>Relevance:</b> The accuracy of the technology responses to human requests and triggers should be contextually relevant. There are three key relevancy components: time, location, and relationship.	<b>Organizational readiness:</b> Measures how familiar an organization is with using conversational AI and the level at which it keeps up with relevant technologies in the market.
<b>Transparency:</b> The ability to set the right expectations with users prior to their interactions so they are aware of whether they are conversing with a chatbot or human, and to rapidly address biases.	<b>Resource readiness:</b> Evaluates whether the organization has and recruits the appropriate resources to implement conversational AI technology (e.g., voice UX/UI designer, etc.)
<b>Personalization:</b> Assesses the ability of the conversational AI to be able to build on previous interactions appropriately to provide a more streamlined user experience.	<b>Org. structure:</b> Refers to having the appropriate business processes and organizational foundations in place to support the adoption of conversational AI technology.
<b>Social norms:</b> Refers to the technology's ability to recognize the most relevant interpretation of what the user has requested. This enables the technology to account human norms.	<b>Business strategy:</b> Emphasize the need to have a strong long-term business strategy that allows for a tech strategy to follow depending on the trends that are coming to fruition in the industry.
<b>Tone of voice:</b> Measures the technology's ability to convey personality, human quirks (laughing, sneezing, sobbing, etc.), and a voice that carries fluctuations in tone when pronouncing words.	<b>Enterprise data:</b> Evaluates the quantity and quality of big data the organization can access and leverage to better compete in the conversational AI market.
<b>Skills and talent:</b> The quantity and quality of the skills that the conversational AI can perform to provide a better and seamless user experience.	<b>System integration:</b> Assesses the level of adaptability of the organization's IT systems and applications, especially whether they can be modernized to accommodate conversational AI technology. Also accounts for the connectivity of this data.

Learn more about our AI-in-CX services -

<https://www.capgemini.com/service/perform-ai/real-world-ai-customer-experience-solutions/>

Learn more about our Conversational Commerce solution -

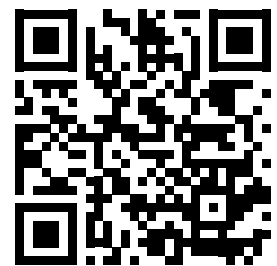
<https://www.capgemini.com/service/retailers-and-shoppers-meet-your-future-personalized-voice-assistant-pva/>

# References

1. Voicebot.ai, "Amazon Alexa Now Has 50,000 Skills Worldwide, works with 20,000 Devices, Used by 3,500 Brands," September 2018.
2. Venturebeat.com, "Google's voice strategy is ubiquitous and comprehensive," May 2019.
3. The Washington Post, "Microsoft and Amazon made their voice assistants into friends. Here's how that relationship works," August 2018.
4. Capgemini Research Institute, "Conversational Commerce, Why Consumers Are Embracing Voice Assistants in Their Lives," January 2018.
5. Capgemini Research Institute, "The Secret to Winning Customers' Hearts with Artificial Intelligence: Add Human Intelligence," July 2018.
6. News.com.au, "Hyundai pitches voice-activated driving assistant at CES," January 2018.
7. Financial Review, "Westpac looks to bots after customer service upgrade," June 2017.
8. Morrisons, "Morrisons launches Alexa skill," November 2017.
9. Retaildive, "Best Buy taps Amazon's Alexa for voice ordering," November 2017.
10. Luna Journal, "Conversational Commerce: Shopping via Alexa and Co. promises great potential for online trade," February 2018.
11. GeekWire, "New Nordstrom mobile chatbot is ready to help shoppers find the perfect holiday gift," December 2016.
12. Adweek, "7-Eleven Launches Facebook Messenger Chatbot," November 2017.
13. Autocar, "Volkswagen to get Amazon Alexa voice control in connectivity push," September 2017.
14. Voicebot.ai, "Amazon Alexa Coming to Select Toyota and Lexus Models," January 2018.
15. Nuance, "Nuance's Dragon Drive Powers the Voice Interface of SAIC's Connected Car Roewe RX5," July 2016.
16. Isobar, "Isobar brings India's First Integrated Video Chatbot technology for Maruti Suzuki Dzire," July 2017.
17. Santander, "Santander opens first of new customer-centric branches," December 2016.
18. PYMNTS.COM, "UBS And Amazon Team Up For 'Ask UBS' Chatbot," October 2016.
19. Plexal, "Meet Zara: the Zurich UK Insurance chatbot co-developed by Plexal member Spixii," July 2018.
20. Capgemini Research Institute, "The Secret to Winning Customers' Hearts With Artificial Intelligence: Add Human Intelligence," July 2018.
21. Carmudi, "Chinese SUV Bestune T77 Has a Holographic Assistant," October 2018.
22. Psfk, "Voice-Enabled Shopping Guide From H&M Helps Customers Search For Home Décor," 2019.
23. EPR Retail News, "Albert heijn becomes the first Dutch retailer to link Siri with its own branded app," October 2017.
24. Ecounsutancy.com, "How Uniqlo is personalising the shopping experience with google powered app," August 2018.
25. Otto, "Ok Google – talk to OTTO!" October 2017.
26. BBVA, "Chatbots and machine learning: discover the new banking," July 2018.
27. TIAA, "TIAA Launches Alexa and Chatbot Capabilities," February 2019.
28. GroceryDive, "'Hey Alexa, what's the future of voice ordering for groceries?'," January 2019.
29. El Corte Inglés, "El Corte Inglés launches its first Bot at Christmas, an online gift recommendation," December 2017.
30. Digiday, "A year in, Marks & Spencer's virtual assistant has helped drive £2m in sales," November 2018.
31. Digiday, "Kia is seeing 3 times more conversions through its chatbot than its website," March 2018.
32. AutomotiveIT, "BMW head of digital customer: 'Innovation will not stand still because car cycles are too long,'" November 2018.
33. American Banker, "Mad about Erica: Why a million people use Bank of America's chatbot," June 2018.
34. DigFin, "How Xiao-i's robot became the voice of China's banks," October 2018.
35. "APAC Insurers to Bank on Blockchain, Cutting-Edge Tech for 2019 Growth." Issuu, Jan. 2019, [issuu.com/charlton\\_media/docs/ia\\_november2018](https://issuu.com/charlton_media/docs/ia_november2018).
36. Capgemini Research Institute, "The Secret to Winning Customers' Hearts with Artificial Intelligence: Add Human Intelligence," July 2018.
37. New York Times, "Google's Duplex Uses A.I. to Mimic Humans (Sometimes)," May 2019.
38. adesso, "adesso brings Ask Mercedes chatbot platform to life," April 2018.
39. PNB Metlife, "NB MetLife introduces Dr. Jeevan, an AI Powered Chatbot for customer engagement," March 2017.
40. Wells Fargo, "The most helpful 'banking assistant' on Facebook," July 2017.

# Subscribe to latest research from Capgemini Research Institute

Receive advance copies of our reports by scanning the QR code or visiting [capgemini.com/research-institute/](https://capgemini.com/research-institute/)



Capgemini Research Institute

Fields marked with an \* are required

First Name \*

Last Name \*

Email \*

☐ By submitting this form, I understand that my data will be processed by Capgemini as indicated above and described in the Terms of use. \*

Submit



# About the Authors

**Mark P Taylor**

EVP, Managing Director, Customer Engagement,  
Capgemini Invent  
[mark.taylor@capgemini.com](mailto:mark.taylor@capgemini.com)

Mark leads the Global Customer Engagement Practice at Capgemini Invent. He has over 25 years of experience designing, developing and delivering transformative solutions informed by data and enabled by technology. Prior to joining Capgemini in 2014, Mark held senior positions in several global agencies.

**Stephane Girard**

CTO – Global DCX Practice  
[stephane.girard@capgemini.com](mailto:stephane.girard@capgemini.com)

Stéphane is the CTO of global DCX practice. He is acting across DCX businesses to share and support global vision: designing and connecting CX platforms with clients' ecosystems and integrating new technology trends. He is also responsible for giving support to iconic deals and deliveries, leading both DCX Technology and Salesforce communities as well as strengthening the relationship with strategic partners on technology matters.

**Kees Jacobs**

Vice President, Global CPRD  
[kees.jacobs@capgemini.com](mailto:kees.jacobs@capgemini.com)

Kees is overall industry thought leader within the Global Sector for Consumer Products and Retail at Capgemini and has more than 25 years working experience in this industry. Kees has a long track-record as leader of digital initiatives in both B2C and B2B domains at leading retailers and manufacturers around the world.

**Jerome Buvat**

Global Head of Research and Head of  
Capgemini Research Institute  
[jerome.buvat@capgemini.com](mailto:jerome.buvat@capgemini.com)

Jerome is head of Capgemini Research Institute. He works closely with industry leaders and academics to help organizations understand the nature and impact of digital disruptions.

**Subrahmanyam KVJ**

Director, Capgemini Research Institute  
[subrahmanyam.kvj@capgemini.com](mailto:subrahmanyam.kvj@capgemini.com)

Subrahmanyam is a director at the Capgemini Research Institute where he leads the India team. He loves exploring the impact of technology on business and consumer behavior across industries in a world that is being eaten by software.

**Ramya Puttur**

Manager, Capgemini Research Institute  
[ramya.puttur@capgemini.com](mailto:ramya.puttur@capgemini.com)

Ramya is a manager at the Capgemini Research Institute. She follows the growing role of digital technologies in shaping and transforming the boundaries of traditional business consortiums.

**Hiral Shah**

Senior Consultant, Capgemini Research Institute  
[hiral.b.shah@capgemini.com](mailto:hiral.b.shah@capgemini.com)

Hiral is a Senior Consultant at Capgemini Research Institute. She works closely with industry/business leaders to help them leverage digital technologies to transform their organization and business operations.

**Abirami B.**

Manager, Global CPR  
Center of Excellence (Crescent)  
[abirami.b@capgemini.com](mailto:abirami.b@capgemini.com)

Abirami is a manager with Capgemini's Consumer Products and Retail COE team. She keenly follows the transformation in consumer facing industries and its impact on businesses and consumers.

The authors would also like to thank Lorna Neville, Shalabh Dhankar, Ron Tolido, Gwendolyn Graman, Joakim Anker-Sletholt, Achim Himmelreich, Prasad Ramanathan, Shannon Warner, Steve Hewett, Tijl Hoornstra, Thomas Saint-Hilaire, Sebastian Tschödrich, Krithika Venkatraman for their contribution to this research.

## About the Capgemini Research Institute

The Capgemini Research Institute is Capgemini's in-house research center. The Institute publishes research on the impact of digital technologies on large traditional businesses. The team draws on the worldwide network of Capgemini experts and works closely with academic and technology partners. The Institute has dedicated research centers in India, the United Kingdom, and the United States. It was recently ranked Top 1 in the world for the quality of its research by independent analysts.



## Discover more about our recent research on digital transformation



[The Secret to Winning Customers' Hearts With Artificial Intelligence](#)



[Conversational Commerce: Why Consumers Are Embracing Voice Assistants in Their Lives](#)



[Digital Transformation Review 12](#)



[Reinventing Cybersecurity with Artificial Intelligence: The new frontier in digital security](#)



[Why addressing ethical questions in AI will benefit organizations](#)



[Building the retail superstar: How unleashing AI across functions offers a multi-billion dollar opportunity](#)



[Turning AI into concrete value: the successful implementers' toolkit](#)



[Accelerating Automotive's AI Transformation: How driving AI enterprise-wide can turbo-charge organization value](#)



[Digital Transformation Review 11](#)

# For more information, please contact:

Global

**Mark Taylor**  
mark.taylor@capgemini.com

France

**Anne-Laure Thieullent**  
annelaure.thieullent@capgemini.com

**Simon Bachelet**  
simon.bachelet@capgemini.com

Germany

**Luca Cito**  
luca.cito@capgemini.com

**Steffen Elsasser**  
steffen.elsaesser@capgemini.com

India

**Darshan Shankavaram**  
darshan.shankavaram@capgemini.com

**Sudhir Rokade**  
sudhir.rokade@capgemini.com

United Kingdom

**Gagandeep Gadri**  
gagandeep.gadri@capgemini.com

**Scott Turton**  
scott.turton@capgemini.com

North America

**Allan Frank**  
allan.frank@capgemini.com

**Shannon Warner**  
shannon.warner@capgemini.com

Sweden

**Partha Panda**  
partha.panda@capgemini.com





## About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

Visit us at

**[www.capgemini.com](http://www.capgemini.com)**

**People matter, results count.**

The information contained in this document is proprietary. ©2019 Capgemini.  
All rights reserved.