



## Topic: Chatbots & Conversational Commerce

What is conversational commerce and how can it be used in today's customer service management? To what extent can chatbots take in charge a customer's request? Everything about it in this EcommerceWiki topic.

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## Chatbots & Conversational Commerce Basic

### Introduction to Conversational Commerce

Chris Messina, the 'inventor' of the hashtag # in tweets, ex-Uber and ex-Google employee, was the first to use the term '**conversational commerce**' in 2015:

*Buying products through a 1:1 conversation with a company whilst using messaging, chat or voice technology; while the company communicates with the customer through either a real employee, a smart chat bot or in a combination of those two options.*

He immediately promised a bright future. Partly due to the rise of voice systems such as Amazon Echo and Alexa, Google Home and Apple's Siri, the attention for this way of communicating with companies has grown.

**Will conversational commerce bring back the personal and human dialogue in e-commerce, there where webshops currently miss opportunities? Will artificial intelligence really enable automation of these conversations? And what will these conversations look like? Our curiosity has been aroused.**

Because of this reason, the expert group conversational commerce has been looking for answers to the following questions:

- What is conversational commerce?
- Is conversational commerce a hype or will it stick and which examples are already available?
- What do consumers think of it?
- What are the opportunities and threats?
- How do you shape the customer journey and what are the effects on customer experience?
- How do you equip your organization and systems to deal with conversational commerce?
- What are practical tips?

### What is conversational commerce?

**Many definitions of conversational commerce are used, that don't differ substantially from each other. For our expert group the core is interaction between consumers and companies, that:**

- occur via messaging, chat apps and/or speech technology;
- is (near) real time;
- takes place with a natural person, virtual assistant (chat bots) or is a combination of both;
- focuses on the customer journey of a commercial transaction (orientation, advice, sale, delivery, service, return).

The playing field in which this interaction take place is however much larger and more complex. Am I talking to a retailer or with a platform? Should I use a voice application or will I get a pop-up on a website? Am I talking to a computer or an employee?

Conversational commerce soon crosses the borders of a company. **Figure 1** shows an overview of this playing field.

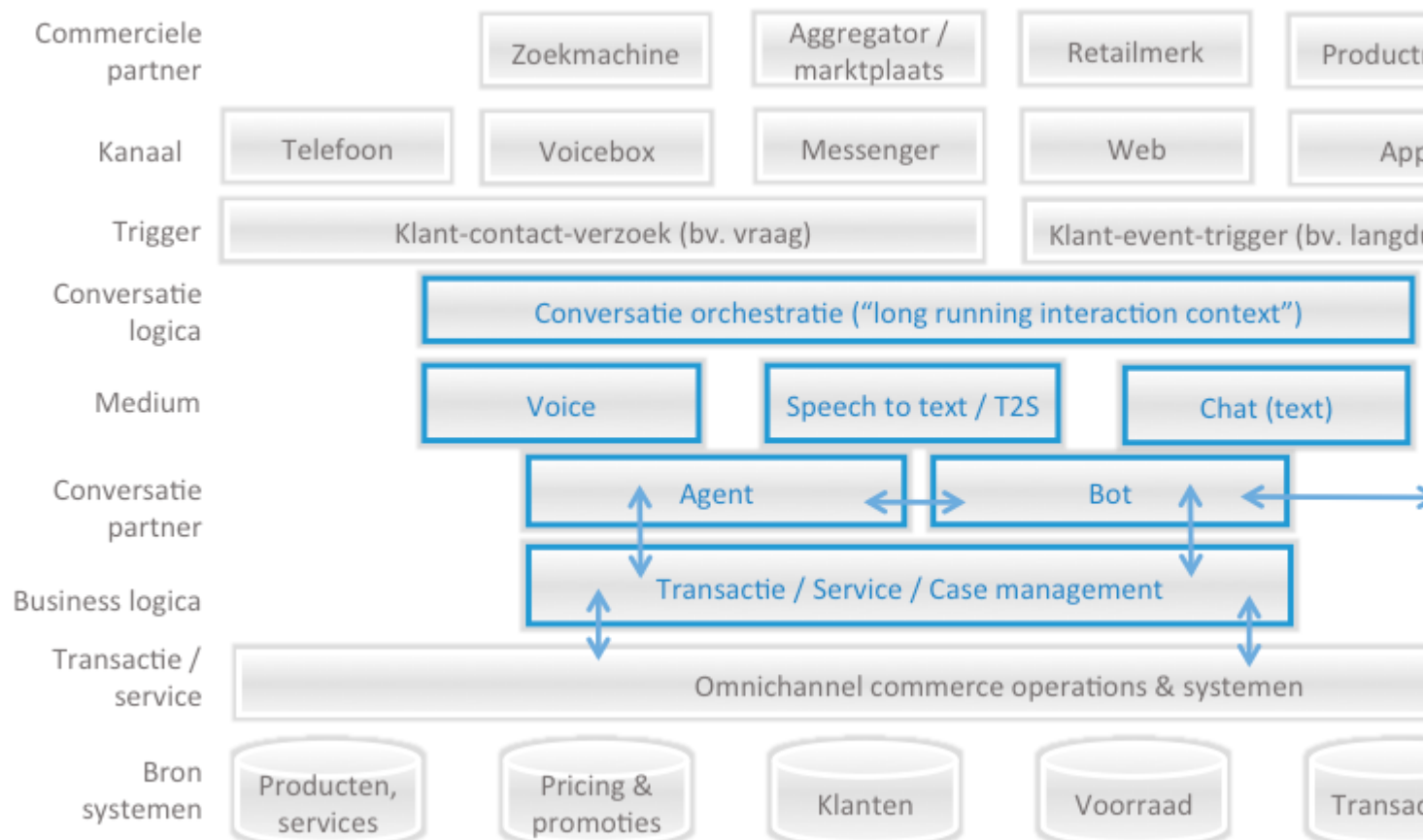


Figure 1 Playing field of conversational commerce preprocess

## The key considerations for this are:

- Conversational commerce **is part of** an omnichannel customer journey and hardly ever a standalone product;
- Conversational commerce **will usually be realized through cooperation** between several partners;
- Conversational commerce **requires integration of systems** to gain access to information in all channels.

## Is it a hype or will it stick?

# 1. Trends that stimulate conversational commerce

Research agency Gartner already predicted in 2011 that **in 2020 85% of customers would contact companies without human interference**. WhatsApp lets companies open verified accounts, H&M cooperates with the KIK platform for their chat bot and Walmart and Google recently announced their cooperation for enabling voice activated shopping. All in all, research and market signals give the impression that **conversational commerce is expected to grow substantially**. Several developments in conversational commerce are the basis of this expectation, especially within platforms.

## Mobile usage

- The ever growing use of mobile phone in the purchasing process, which is a logical stimulus for the use of chat services. In addition to this, smaller screens also requires a more targeted, more personal offer.
- The growth of chat, voice and messaging as a means of communication:
  - o 58% of mobile phone users between the ages of 14 and 29 use the voice function regularly
  - o Around 6 million Amazon Echoes were sold in 2016 (Forrester)

- o Messaging grows faster than social networks, replaces FAQs



- More and more consumers do 'everything' within a single platform. WeChat in China is a clear example of this, and Forrester reports that for America, 84% of the app time is spent within 5 apps. We are getting tired of the 'app store'. A chat platform is promisingly positioned to displace apps and thereby also to facilitate many purchases and related activities.

## Personalization

- Purchasing behavior is increasingly based on inspiration, personalization and convenience. Through a personal conversation that also responds to context, this can be offered. "I have a job interview soon and need a clean shirt because I spilled coffee". This can happen on a self-chosen moment, where one does not necessarily have to 'stay on the line'.
- From supply to demand, from navigation to demand-oriented supply: while the diversity of products is ever-growing, the prevention of choice stress is an important factor. A personal conversation that leads to a targeted offer fits into this.
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## Technology

- The rapid development of a number of relevant technologies is expected to lead to a technology push of conversational commerce:
  - o Voice control and language recognition, which go towards shops via music installations and

thermostats

- o Artificial intelligence and big data: at this moment the estimated accuracy of artificial intelligence is about 90%, it is expected that when this becomes more than 99%, it will really be 'game changing' in the acceptance by consumers
- o Ever easier ways of paying in online conversations, replacing the long step-by-step check-out process with a digital ID and one-click payments.



## 2. Examples

*There are a number of international cases that show the potential of conversational commerce.*

A well-known example is that of **Northface**, where fitting sports equipment is purchased via an online conversation with a chat bot. More straightforward is the example of Domino's, where a pizza is ordered. This makes it clear that a predictable purchasing process is easier to realize without human intervention than a advisory- and purchasing process with many influencing factors.

**Amazon Alexa** shows the potential that can be found in the combination of voice shopping together with a broad marketplace product range. Using a third-party platform can be smart. That is what H&M does by offering their chat bot via the **KIK platform**. And also Walmart recently started a collaboration with Google in the field of voice shopping.

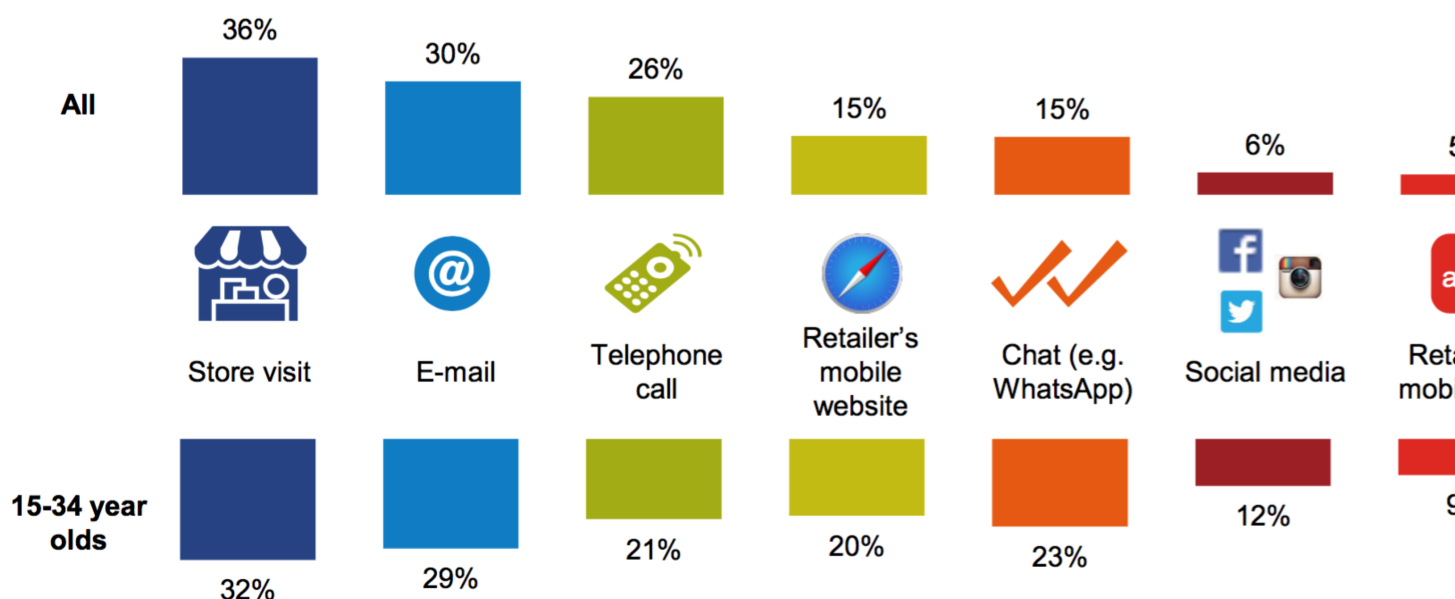
The Dutch national pride, **airline KLM**, has recently introduced **BlueBot**, an English chat bot through which customers can order tickets. KLM uses Facebook Messenger for this purpose and has linked the bot with the ticket system and their CRM system. If the chat bot fails to adequately help the customer, service staff can continue the conversation. This service will soon be offered voice-controlled, KLM promises.

### What do consumers think of it?

### To what extent is the Dutch consumer prepared to let the purchasing process take place via conversational commerce?

This question is difficult to answer unequivocally: it may ultimately involve only a few steps within the total omnichannel customer journey. **Are we talking about voice or chat, and in a conversation with a chat bot or with an actual employee?** In order to develop a feeling about it, a research was performed (in collaboration with GfK) among 5000 consumers regarding chat as an interaction form and regarding the consumers' willingness to buy via chat bots.

## Preferred mode of contact with retailers in case of need for information or a

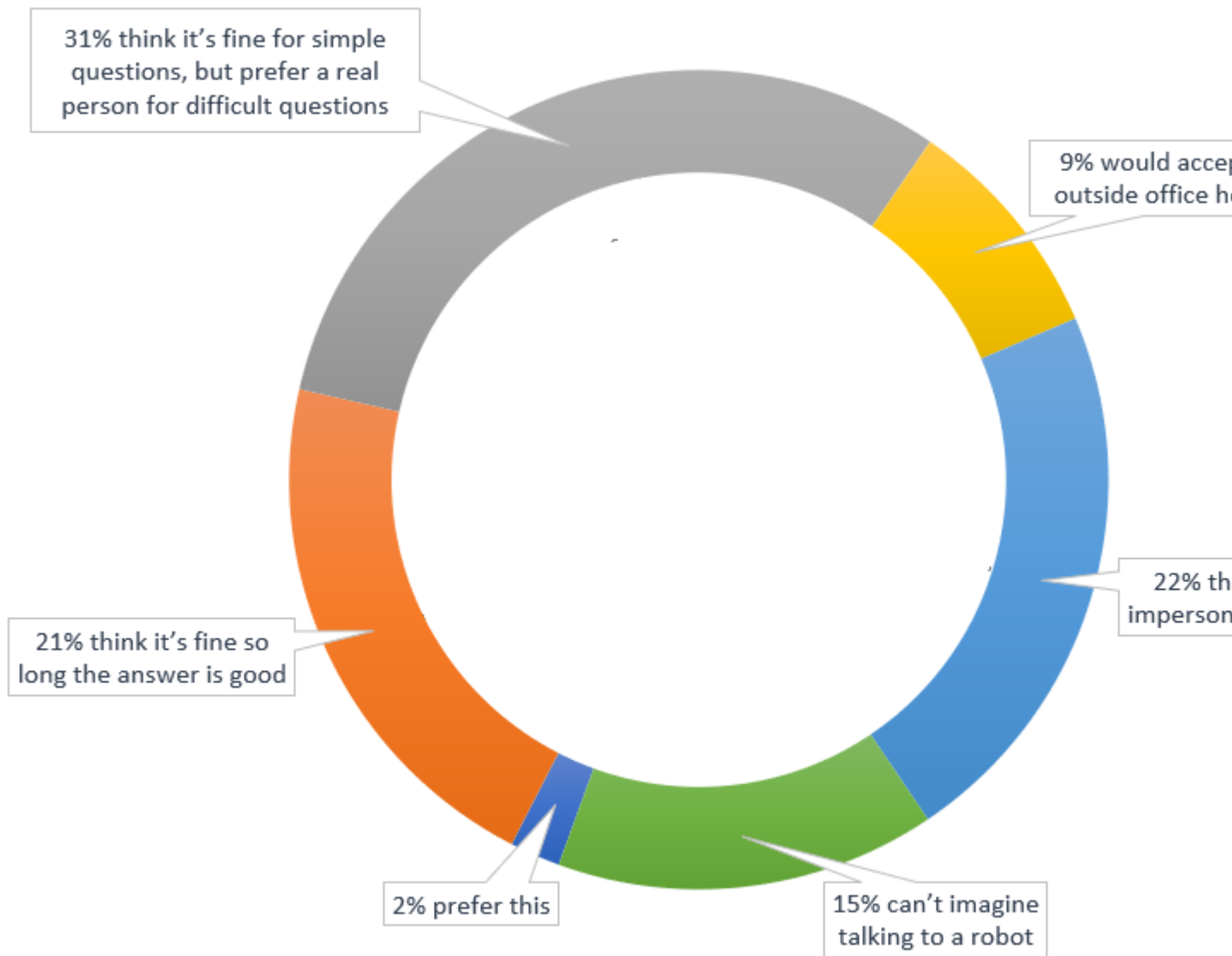


About **15%** of the consumers surveyed said they wanted to use chat applications for contacting a company. This is **10%** more than the score of retailer-specific apps. It is noteworthy that the willingness is greater when one is younger, higher educated or has a larger household / family. Of this 15%, **72%** indicated to be open to use chat for making purchases.

In terms of products, **clothing, electronics and tickets are best-suited for conversational commerce** according to the survey, comparable to the suitability for online shopping in a general sense. Food and home & garden score the lowest when it comes to suitability. Of the people who are open to chat as a means of communication, almost 35% say they want to buy clothes in this way, for electronics this is around 34%,

## And what do consumers think of the idea that they are talking to a 'robot'?





## Chatbots & Conversational Commerce Advanced

### What are the opportunities and threats?

*Conversational commerce offers retailers and product brands opportunities, but can also result in threats. These are present depending your type of company and assortment. The overview below identifies the most important ones.*

## 1. Opportunities



The main opportunity offered by conversational commerce is to **enable direct and low-threshold contact with consumers**. This has the following advantages:

- More and more specific information about customer needs and context can be obtained during a conversation; consumers also share information more easily, **mutual 'engagement' can be increased** ("I am looking for a stain remover for certain type of stain", "I am looking for a gift for a 6-year-old");
- A more personal and more appropriate offer can then be made ("Should I send it to our Schiphol store, ready to be picked up by you?") And the right choice can be confirmed ("With this dress you're undoubtedly the best-dressed woman of the party");
- It offers companies the opportunity to be present when need arises (because consumers grab their phone for almost everything) and then offer **instant satisfaction**;
- It combines the possibility of holding a conversation while using visual material;
- It can **facilitate and accelerate repeat purchases**;
- Consumers ignore legitimate chat messages (for the time being) less quickly than, for example, e-mails;
- With a smart use of resources, it can also **result in cost reductions through efficiency**, and it is scalable;
- The conversation can easily be logged and later searched or analyzed.

Organizations can learn a lot. A chat bot better understands the exact questions of the customer than when customers are referred to the FAQ. The chat bot's answers can still be 'fixed' and can be improved manually or continuously optimized via a learning application.

Connecting the conversational commerce solution to an existing platform naturally also offers the advantages associated with participating in a platform. It can **generate extra traffic** while consumers do not have to install an extra app. At the moment, it can still bring certain first mover advantages by being the first provider to use these types of chat bots in a product segment.

## 2. Threats

Starting with conversational commerce can also bring a number of threats. An important aspect in this is the quality of the conversation. A number of factors play a role in the quality of conversations in chat bots:

- The quality of the Dutch language in the used voice / chat technology is not at par; this should,

however, be a matter of time before sufficient improvements have been reached in the Dutch language;

- **Replacing 'Human-to-human' with 'Human-to-chat bot'** gives the **risk of miscommunication**, which can quickly lead to disappointed consumers;
- Switching channels while maintaining content, context, conversation and authentication is quite complicated, both in terms of technology / information provision as well as organizational.

Setting up a professional solution requires a considerable investment, especially in time to make the system smarter and better. However, the above points emphasize the importance of this. If this investment is insufficiently done, **the danger of insufficient quality** or uniformity soon arises. This will detract from the brand and **can be perceived as 'cheap' by the consumer**: I am being discarded via a cost-effective but inadequate solution.



In addition to this, stricter privacy rules do not simplify the use of chat bots. With algorithm-based conversations and with the use of speech technology, **unique identification** deserves special attention, especially for recording a formal transaction.

Finally, in addition to the aforementioned benefits, additional threats arise when conversational commerce is offered via an existing platform such as KIK. The term **digital sharecropping** is a nice indication of this: if you grow your crops on the basis of a suzerain, you are very dependent on that suzerain. This also counts for the online situation: which position do you hold within the platform, and what if the rules are suddenly changed? Who owns the (customer) data and what does the platform do with all the information, or what if the chosen platform suddenly drops in popularity?

These are all threats that also include selling or advertising on online marketplaces and social platforms such as Amazon and Facebook.

## How do you shape the customer journey and what are the effects on customer experience?

*Conversational commerce will mainly **create added value** through the personal character, the one-on-one conversation with the appropriate personalized product and service offer. A number of positive aspects of a physical shop visit can hereby also be realized in a digital channel.*

Figure 5 shows the added value given by offering the personal conversation that is traditionally held in the store via the digital channel. In collaboration with the Hogeschool Utrecht, 225 consumers were asked why they would prefer buying in a physical store. Two of the three main reasons (personal experience and the ability to ask questions) are typical advantages that conversational commerce can offer digitally.

With this in mind, it makes sense to look carefully at these positive aspects. Our expert group looked into this by reviewing the purchasing process in the Amac stores, the largest Apple reseller in the Netherlands. The use of this example increases the specificity. Of course, these results are not necessarily fully applicable to all situations.

### 1. Customer journey physical store

The process in the store starts with greeting customers when they enter the store. Research within Amac

has shown that **an explicit greeting from people who enter the store significantly increases the conversion.**

When employees and customers start a conversation, **the first important goal is to build a 'mini-friendship'**. This can be done by showing genuine interest, while also providing valuable information. Think of questions like "What kind of work do you do?" Or "What type of education do you follow?".

Then follow the well-known W-questions (who, what, where, why) to find out the exact need (a laptop for school) but also values ("I think design and a big screen is important"). as possible. Figure 6 shows the complete customer journey.

## 2. Customer journey conversational commerce

Subsequently, the figure shows per step in which way these steps can be implemented within a conversational commerce customer journey. Of course, **chat or voice will also be part of an omnichannel customer journey**, often through many different channels.

## 3. Pilot for Amac

To put the above into practice, **Magnus, together with Amac, developed a pilot chat bot solution** in which consumers can conduct a purchase dialogue. For the experts: the pilot was realized using the **KIK** platform for the chat in combination with artificial intelligence technology from IBM Watson. The result is a **simple purchase dialogue** that mainly supports the 'happy flow'. This was astonishingly fast to realize. However, it became clear that much more work would be necessary to enable a meaningful integration with underlying data sources. Nevertheless, the realization of this pilot has already provided many insights. The practical lessons are included in the section "Practical tips". The pilot was also used for research into the customer experience during a conversational commerce purchase.

## 4. Neuro Usability study into customer experience based on the pilot

Based on the Amac pilot, a neuro usability study into the customer experience was carried out by Braingineers, a participant in the expert group. They let two groups of eight respondents each use Amac's pilot chat bot. During this user session, brain activities were measured, which, based on a lot of available data and artificial intelligence technology (neuro usability research) is then categorized into three types of emotions: attention / focus, joy and irritation. The same measurement was made during the purchase process on the Apple website. Results of at least 6 participants are already proven to be representative for these measurements.

A number of interesting issues emerge from the measurements:

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- Generally, the chat bot scores almost two points higher in rating (on a 10-point scale) than the Apple-web shop; this rating is based on emotion (in contrast to normal customer surveys, which lead to rational feedback);
- The **frustration increases strongly with a wait-to-answer time of more than 2 to 3 seconds**; responding very quickly on the other hand (in human conversations unbelievably fast), unlike our expectation, does not lead to negative emotions; this may be different if it is not clear that it's a chat bot;
- **Unexpected / unsatisfactory answers immediately show a frustration peak** in emotions, which underlines the importance of the quality of conversation;
- When **showing (product) images** during the purchase conversations, **the joy increases significantly**. This may be a reflection to the purchasing process in the store, where Amac also consciously hands the consumer the product in their hands, so that returning (and therefore not buying) becomes more difficult. The display of images stimulates the bond with the product;
- **Long or many messages** (which fall outside the screen) and the use of **technical terms cause frustration**;
- Appropriate **'personal touch'** (thank you, **humor**, compliment) **leads to significant joy**.

**Frustration is cumulative**, it builds up during a conversation or customer journey. These types of measurements and the resulting insights can help to keep improving the chat bot continuously and to further

reduce this frustration build-up. The research results can be viewed via [demo.brainpeek.net](https://demo.brainpeek.net) (login: [shopping@brainpeek.net](mailto:shopping@brainpeek.net), password: tomorrow).

## How do you equip your organization and system to deal with conversational commerce?

### 1. Organization

The use of **conversational commerce also has** a number of **business and organizational consequences**.

The brand experience within the conversation channel largely reduces text perception. So word use and conversation techniques are decisive in this. This requires other disciplines, such as conversation design and conversation protocols.

Another aspect is that the product range within the conversation can only be very limited. On the basis of the dialogue, the consumer expects a targeted and appropriate offer of probably a maximum of 3 to 5 alternatives. This requires personalization and a strong product suggestion functionality.

In addition, **the need for data and knowledge** from various sources and business functions **will also require cross-departmental collaborations and agreements**. Companies must allocate resources and develop competences in this area.

Online chat with real employees of companies has a lot of added value and is considered valuable by consumers (see figure 2). For example, BCC (Dutch electronics retailer) helps the online customer via a chat service with experienced product specialists from the store. The chats are mostly about the individual needs of the customer with regard to a product and added service possibilities. Thanks to the specialist product knowledge, customers are immediately assisted in the online funnel and this contributes positively to the customer satisfaction and the conversion of the online customer. This requires a tight organization and planning of these employees.

While further automation with the help of chat bots takes place, **the importance of data, artificial intelligence (AI) and emotion analysis grows**. The need for data scientists, psychologists and AI developers will increase further. And last but not least, trust and investment space in chat bots and other artificial intelligence technology is required. This investment concerns not only the cash-out for the purchase of technology, but also the investment of time to make the chat bot intelligent for specific companies.

### 2. Technology

To develop a good understanding of the IT architecture behind the chat function, it is important to distinguish a number of issues in general terms. These are shown in Figure 10.

- The outer layer is that of the **conversation user interface such as** Whatsapp, WeChat, KIK or a voice system like Siri with integrated speech recognition;
- **The chat bot is an automated chat solution** that is often active within such a platform;
- Through so-called **APIs**, these chat bots integrate with artificially intelligent virtual assistants, who, **on the basis of Natural Language Processing (NLP, language comprehension), can converse with consumers and 'transfer' to underlying services**;
- These services (web services in the cloud) provide the bot with relevant data and information to serve the consumer; these services can be offered by own systems or third parties, but can also be connected to the Internet.

A resident of Amsterdam asks Alexa what the weather forecast is. Alexa understands this question and understands that it revolves around the weather forecast for Amsterdam. Alexa then uses an API to connect to Buienradar to retrieve the forecast for Amsterdam, and returns this in a spoken dialogue "The next hour it will remain dry in Amsterdam, after which rain is expected. The temperature is 15 degrees Celsius and there is little wind." In this example, the temperature could also be based on an Internet-connected thermometer that is present in the vicinity of the consumer.

**The chat bot is organized on the basis of 3 important aspects:**

- **Intentions:** what is the purpose of the user? For example: making a purchase;
- **Entities:** the issues that matter. For example: products, stores, etc.;

- **Dialogue:** how does a conversation work? For example: greeting followed by an opening question.

The virtual assistant makes the chat bot smarter. This is done in the following ways:

Figure 11 shows how important it is to continuously make the chat bot smarter by analyzing conversations and processing the feedback in the system. This takes time! Professional software solutions support this learning process with analyses on content, but also on suspected emotions (recognized from language use, emotions and from voice pitch and voice volume). Finally, a good integration with other systems ensures that the chat bot can increase considerably in knowledge.

### 3. Laws and regulations

It goes without saying that nowadays **privacy is a major point of attention, also in conversational commerce**. A player like Amazon takes this seriously and has strict rules for the services developed by third parties ('skills') on the Alexa platform. **Banks and insurance companies** that already offer their customers several chat functions often **have strict protocols about which data may or may not be used in chats**. And an interesting development in the use of voice chat is **recognizing people by their voice**. Google Home already uses this. The exact consequences of (new) legislation on consumer data, privacy, identification and purchase agreements in relation to conversational commerce have not yet been considered in detail by the expert group.

## Chatbots & Conversational Commerce Expert

### What are practical tips for using chat bots?

Both from our experiences with the Amac pilot chat bot and project experience from a number of expert group members, we detailed several practical tips for using conversational commerce with the help of a chat bot:

#### Manage expectations

- Manage the expectation: clearly **state what the domain of the chat bot is** and tell the consumer that it's talking to a chat bot;
- **Don't make the chat bot domain too big**, rather split up (one separate chat bots for searching shops and one for requesting product details are much easier and more robust to realize than if both functionalities are combined);
- **Make the chat bot easily accessible** within your website: a chat bot on the homepage increases the consumer's knowledge expectations of the bot when compared to a chat bot on the sub-page 'affiliates';

#### Be nice

- Understand that **the error tolerance from the user is low**;
- **Always answer**, even if the question wasn't properly understood: "Could you rephrase the question?";
- **The first interaction is very decisive**, so ensure a neat and 'robust' opening of the chat that builds trust;
- Responding too quickly may appear to be implausible or unresponsive; however, the test did not show that this led to irritation as long as one knew that it was a chat bot; when working with both employees and a chat bot, this is a point of attention;
- **Score with emoji and humor**;
- **Be prepared for standard questions** ("Are you real or a robot?", "Can I order pizza?"), by having a (humorous) answer in store ("Beep beep, I am a real robot" or "Unfortunately, the kitchen has just been closed, how can I be of service? ");

#### Keep it stupid simple

- Offer choice options (buttons, numbers) where possible, **which reduces the chance of errors** and speeds up the ease of use;
- Use a maximum of 3 text balloons after each other and a maximum of 3 lines of text per text bubble; long sentences and difficult terms lead to irritation and (choice) stress;

#### Better be safe than sorry

- Avoid having to enter privacy-sensitive data;
- **Make references to external sources** ("According to the KNMI (Dutch weather institute), this afternoon there will be rain in Amsterdam");

#### Never leave your bot alone

- Provide an 'overflow': **after 3 unsatisfactory answers** or with certain emotions in the consumer's response, you **switch to a human agent** or ask whether you can contact them later by telephone or by email. Also be sure to, at all times, offer this choice via a separate button.

### Conclusions and preview of the future

## Conversational commerce is still at its infancy, but it will claim its own place in the omnichannel channel mix.

The high score of chat bots when compared to regular web shops in the neuro-usability research, the willingness of use among young people in the GfK research, the underlying (technological) developments and the international examples all endorse this. In our opinion, **the form** (voice, chat, device, platform) **can change, but the underlying artificial intelligence used for personalization, knowledge and cleverness will play a permanent role in shopping.** Here chat bots follow a development process from discovery to assistance to authority.

For Dutch-language applications, chat bots are still at the beginning of their development, which can be explained by the difficulty of the Dutch language in combination with the relatively small language area. The first Dutch applications will therefore focus on highly niche domains within which scripted bots can perform tasks. The big breakthrough can be expected if Dutch-speaking virtual assistants reach or even exceed the human level of service by the level of artificial intelligence and their rapid use of all kinds of data sources.

Nevertheless, **it offers first mover advantages to start working with conversational commerce already**. It can yield a competitive advantage or an **increased benefit factor** in the short term, but more importantly a lot of educational insights, knowledge and an early build-up of data. It will require more investment and endurance now than in a few years. But the rise of voice, chat and virtual assistants in the customer journey could happen faster than we think.

Despite all the technological developments in the field of chat bots and artificial intelligence, **the 'cleverness' of your chat bot depends on how smart you make it**, especially where it concerns business or product-specific matters. This requires a significant investment in time and attention, both towards technology and organizational focus.

Like any channel, conversational commerce has or will receive its own conversation rules. In this channel it is not only about what you say, but also about how and when you say it. **The real challenge is how, with all this complex technology, you ultimately achieve a 'warm feeling' and a 'pleasant conversation'**, which brings the customer relationship to a higher level. After all, customers are just people!

As indicated, we are only at the beginning of this development. What can we expect in the near future in the area of ??conversational commerce? First of all, we expect that the Dutch-language barrier will soon be dismantled. And we think that the combination of using images and voice will be introduced soon; in other words, a 'two-way speaker with a display' on the kitchen table. **The development of artificial intelligence in combination with big data leads to hyper-personalization**, and with that the chat bot will have enough information with only 'half a word'. Finally, we think that the initiative for a conversation will also increasingly come from the chat bot, as if it were a real human relationship.

## Chat bots are indeed just like people!



