Artificial Intelligence & the eCommerce Customer Service Conversation

ROBIN
Introduction

“Should I bot or not?” is probably the question I’ve been asked the most this year by eCommerce leaders all across Europe.

The answer depends on what you mean by a bot and — most importantly — the actual contents of your shopper questions.

Some service questions will be bottable, some are avoidable and should be fixed directly in the customer experience, and some you should actually encourage more of.

In this white paper, we help eCommerce and customer service leaders align around the potential of artificial intelligence in customer service — with a specific focus on chatbots and service conversations.

We help you cut through the BS around AI and marketing claims for chatbots. We help you understand what to bot, what not to bot, and ultimately; how to win at service when the future will be dominated by those who understand both the value of tech and humans.

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01 The future is coming, but nobody knows when

Depending on whose story you prefer, artificial intelligence (AI) is either humanity’s saviour or its ultimate downfall. Moreover, the timeline ranges from ‘It’s already started’ to ‘It’ll never happen in a million years’.

Predicting the future of AI has always been a fool’s game. So we will look at the promise and potential of advanced tech in eCommerce through the lens of Amara’s Law instead.

“We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run”

— Roy Amara, Scientist, President, Institute of the Future
By way of levelling the playing field, here are three big things that we believe everyone should know when it comes to artificial intelligence:

- At best AI terminologies are ambiguous, at worst misleading;
- AI isn’t one thing, it’s a collection of technologies that mimic human behaviours to get stuff done; and
- AI doesn’t have to be that smart to have real value.

Let’s have a look at each one in turn.

#1: AI terminologies are ambiguous at best, misleading at worst

There are at least eight types of human intelligence. And while IBM computer Deep Blue beat chess grandmaster Garry Kasparov back in 1997, can we really consider Deep Blue to be mathematically intelligent, or was it just really good at running numbers?

Moreover, what about emotional intelligence — the type of intelligence needed to, for example, raise a child. Of course, nothing even vaguely approaching this level of EI exists in machines.

Ultimately, there is no one agreed upon definition for human intelligence let alone one for machines. And the deeper we dig, the more ambiguous AI terms become. As Andrew Ng, founder of Google Brain, former Chief Scientist at Baidu and the world’s most celebrated guru in deep learning said,

“Because of the term ‘neural networks’ people think we’re creating artificial brains. The truth of the matter is that we really have no clue how the human brain works — let alone that we can build a computer that works like the human brain”.

Let’s not be sucked in by the AI spin.
#2: AI is a collection of technologies that mimic human behaviours

In the broadest terms, AI is about machines doing stuff in the way that humans do. Put like this, it should be easier to imagine how individual technologies can be combined in different ways.

Some examples include:

- **Natural Language Processing (NLP)** helps computers understand and generate speech, and writing. NLP is considered one of the hardest AI problems to solve. The vast majority of chatbots use very little or no NLP at all. Stories of bots becoming aggressive, sexist and racist help explain why.

- **Vision systems** aim to ‘see’ like humans and are often augmented by other technology. Take, for example, Schiphol’s airport system in The Netherlands. This system can recognise your appearance and then link it to your passport, tickets, flight info, and more. Vision systems are gaining traction in everything from security to warfare, and gaming to advertising.
• **Robotics** is computers physically doing activities like humans. Robots are cool but have little practical value for us mere eCommerce mortals. Although robotic process automation (RPA) is a very boring subset of robotics, it has enormous value. It automates repetitive workflow tasks previously done by humans. Around since the 1950s, RPA has only recently been bundled up into AI.

• **Machine Learning (ML)** helps a programme progressively improve the performance of a specific task. There are various types of ML. Applications range from simple product recommendations on eCommerce sites to complex diagnostics and forecasting across industries.

• **Cognitive systems** aim to simulate human thought processes such as analysis, problem solving and planning. In order to tackle complex problems, these systems combine data mining, pattern recognition, NLP and more. There is no one definition of what a cognitive system is.

### #3: AI doesn’t need to be smart to have value

Some people still fantasise about how super-intelligent droids will solve humanity’s biggest problems. However, others say Artificial General Intelligence (AGI) — in which a machine can apply its intelligence to any problem rather than just one specific task — is not even theoretically possible.

And yet AI does not have to be super-intelligent to have value. While super-intelligent droids sound sexy, the value in AI today lies in smaller, bite-sized chunks.

The bots we see in eCommerce nowadays are one such example.
There’s such an array of bots out there that we find it helpful to categorise things into two big buckets: rules-based bots and what one could truly call artificially intelligent bots.

**Rules bots are automated, pre-programmed, and for simple tasks**

These are the by far the most common types of bots out there today. Virtual assistants are basically the same thing albeit with more functionality. When designed well, all are of value. Almost all rules-based bots are called ‘AI’ when, for all intents and purposes, the vast majority are not.
While not quite dumb as a brick, they are certainly not ‘intelligent’. They cannot understand what you are saying, nor are they designed to do so. Rules bots simply respond to trigger words, phrases or clicks with a set of pre-programmed responses of text, images or actions.

Improving upon basic bot functionality is maybe the hottest trend in 2018 for eCommerce automation, and it is happening across industries.

Over the past twelve months, cosmetics brands like Sephora, Estée Lauder, and L’Oréal, have all rolled out chatbots. Used for marketing and sales, these virtual assistants help showcase portfolios, product matching, and so help with up- and cross-selling.

These shopper bots are sometimes connected to other data sources (such as stock management systems or customer relationship management systems) which may incorporate some machine learning techniques to deliver better results. But more often than not, they do not. Instead, a programmer will optimise responses after reviewing some analytics.

The travel industry is also big on bots, using them to automate and optimise booking services. Booking.com built an in-house bot that serves as a good example. The company now claims to resolve half of all inquiries within five minutes. While this may sound like a long time for resolving customer questions, travel queries can be complex and varied.

While none of these chatbots actually ‘chat’, using bot to automate eCommerce tasks can be of great value. And, of course, there are any number of companies willing to help you develop your own.
Truly artificially intelligent bots are few and far between

While ‘truly’ artificially intelligent bots also use rules, they do not define them.

Many can understand and generate natural languages (speech and writing) on their own. These AI bots are almost always hooked into multiple systems, data, and knowledge-bases. They can work autonomously, and include lots of advanced machine learning so that they can identify patterns in data, and make decisions for themselves.

These bots are mainly the experimental territory of the big tech players (think Microsoft, Amazon, Apple and Google). Despite grabbing headlines and the popular imagination, the value of these AI bots remains largely potential — for now, at least.

Duplex, the AI behind Google Assistant, is a great example to hone in on, since it functions around a natural human conversation. Technologically speaking, this is a very big deal. As Sundar Pichai (pictured below), Google’s CEO, said recently,

“[Google Assistant] brings together all our investments over the years in natural language understanding, deep learning [and] text to speech.”
Focused on scheduling specific types of appointments, Duplex is widely considered the current apex of bot NLP/conversational technology. Take a look at Google’s presentation and see what you make of it.

From an eCommerce perspective, we cannot help but think of a simple service conversation and wonder how that might pan out. We leave you to draw your own conclusions.

Meanwhile, if you’re considering what to bot — and how — we came up with this handy formula:

\[
\text{Wide Variety of Products} + \text{Up/Cross-Sell Opportunities} = \text{Virtual Assistant!}
\]

\[
\text{Limited Number of Questions} + \text{Limited Number of Answers} = \text{Chatbot!}
\]

While bots are clearly valuable in eCommerce, current marketing claims about them must be taken with a hefty pinch of salt.

Gartner, for example, predicted that by 2020, 85% of customers will manage their relationship with enterprises without interacting with a human. Seems unlikely. Still, one particular claim stuck out to us, from Accenture:

“80% of chat sessions can realistically be resolved by a chatbot.”

80%? Really? Given our healthy scepticism, we decided to put this to the test with real-life examples of service questions from 120+ leading Dutch eCommerce stores.

To select the questions, we considered the both the full customer experience and the eCommerce shopper journey.
Some people believe customer experience will become the #1 loyalty factor. Some also believe that, by 2020, it will become the competitive differentiator.

While hard business-case data on CX is still a little thin on the ground, numerous CX surveys make several things clear:

- Customers are desperate for an improved experience;
- 71% of companies see CX as a competitive differentiator; and
- Only 13% of brands self-rate their CX delivery at 9/10 or better.
Perhaps the main reason why so few brands rate their CX highly is that the topic of customer experience covers a lot of ground: omni-channel strategy, web-store user experience and interaction, service and after-service conversations — even the tone and style of customer communications.

Figure 2: Customer experience spans multiple topics and disciplines

The eCommerce shopper journey is complex

As we know, the eCommerce shopper’s journey is made up of various phases: orientation, decision-making, shopping, paying, delivery and unpacking, after which there’s a possible additional process of returns.

To negotiate this journey from beginning to end, customers must have stamina. They have to traverse multiple phases and switch between multiple search and recommendation engines, channels, media and more.
And this is what makes the full experience so difficult to manage: you are only as good as your weakest link. And if you have several weak links in a row, the impact on a customer’s experience can be devastating.

![Customer journey diagram](image)

Figure 3: Individual touchpoints may perform well even if the overall experience is poor

Having noted this, we’re going to take one question from each of the phases of the shopper’s eCommerce journey in order to test the claim that 80% of these questions can be resolved with a chatbot manning customer service.

The answer may not be as black and white as you think.
04 Five eCommerce shopper questions

We drew on the experiences of our customer base of over 120 leading Dutch eCommerce players in order to define the typical questions they encounter at each phase of a customers’ journey.

While it wasn’t a full-on scientific selection, we did look for questions that were representative. Read on to find out what we uncovered.
Example #1: Orientation

“Hi, my kid is going to secondary-school, and I want to know which size bag is right for him. He is 140 cm tall.”

Could we solve this sizing issue with a bot? Well, you could build something around size and height tables to match one’s products. So yes, you could probably automate something.

However, this shopper is most likely a relational shopper — a shopper actively seeking expert advice to help them decide. As we wrote some time ago, these relational shoppers normally comprise just 20% of your store visitors and yet they are usually responsible for a whopping 80% of your business.

This presents us with a lovely opportunity to win over this customer, build the customer relationship, and maybe even cross or up-sell in the process.

While you could in theory bot this answer, we would say that this is a ‘desirable’ shopper question to have in your inbox!
Example #2: Decision-making

“Hi, I am considering buying the ZYxel NAP 102 as an extra [internet] access point. But how do I install this? Can a layman do it?”

Bottable? Well, this is from a website that offers more than 1 million products. Many of these products also work together. So, if you wanted to bot questions like these, you would have to map all of this complexity.

Although this doable, it would be wiser to simply make a thorough user manual available on the site to avoid this question coming up again and again.

This would eliminate both the break in overall customer experience and the service question itself. So, we would class this as an ‘avoidable’ question.
Example #3: Payment

“I am in the middle of placing an order with a discount code, but according to me 12,5% discount on € 30, is € 3.75 and not € 0.37! How is this possible?”

Are we going to solve this with a bot? Many of our customers seem to struggle with discount codes for some reason. And yes, it is totally possible to bot. However, we recommend fixing this in the customer experience. As a top brand, with service as a key differentiator, things like discount codes must run like clockwork. There is something broken, and it needs fixing.

So, we would call this an ‘avoidable’ question.
Example #4: Delivery

“Last Sunday I ordered a pair of jeans with you. [The site says] The jeans are in stock. But as of today, I haven’t received a parcel. Where is it?!!”

At ROBIN, we would not consider botting these sorts of questions. Instead, we would allocate our best customer service people (check out Robots Can’t Care: Humans and Empathy in Customer Service) to handle this and, if possible, solve it in one interaction.

While this is an ‘avoidable’ question, it may take some root cause analysis to resolve it. Therefore, it is better to solve this question in the customer experience rather than have a bot handle these sorts of questions. On to the last example...
Example #5: Unboxing

“Hi, I have a return shipment. Tomorrow it will have been 13 days since I ordered. Postage takes 2 days. Will I still be on time, because your return policy is 14 days?”

This is a good question. It’s entirely possible that the answer is already on the website somewhere, buried in FAQs, but customers do not want to put in the effort to trawl through all that info.

So, bottable? We think yes, absolutely! Most importantly, this would make a solid positive contribution to the overall customer experience.
05 Bottable, avoidable desirable?

From our analysis, the claim that 80% of shopper questions can be resolved by a chatbot simply does not hold true in eCommerce! Our data and analyses show:

- 15% of questions are bottable;
- 45% of questions can and should be avoided by fixing them in the CX; and
- 40% of questions are ‘desirable’ and should be handled by a customer service rep.
While these percentages are based on a sample of our customer base — and your proportions of bottable questions would be dependent on the specific type of store you run, your portfolio, the maturity of your service operation and so on — we believe these numbers are enough to offer solid principles for what to bot and what not to bot.

Here’s some further detail:

- **The 15% of ‘bottable’ questions** include any number of FAQs such as: How long do I have to send a return? And, when will I get my money back after a return? A company could easily bot its brand story, or even bot all the questions associated with the typical issues that arise when making an online purchase — from creating an account to managing passwords, even explaining the full returns process.

- **The 40% of desirable questions** are the ones that you really want to have handled by a skilled rep. By focusing on the questions that help reduce shopper insecurities, and close more orders in the cart (which, in our experience, always leads to a 20% conversion and up to 50% conversion for some) there are a tonne of commercial and brand benefits to be had.
This is why, while onboarding new ROBIN customers, one of the first things we look for is insights into the actual content of conversations across a company's customer service function.

Moving forward, our goal is to help a team receive fewer unnecessary, annoying, and avoidable questions (which, by the way, are also annoying for the shopper) in order to free staff capacity to handle valuable questions for all concerned.

**Contents matter!**

We know from experience that many retail brands are simply not aware of the specific contents of the questions asked by their customers, and handled by their customer service team.

Even fewer brands analyse these questions. In fact, many don’t even consider the contents important at all. This is potentially a huge lost opportunity.

Some things to consider:

1. **Think about the proportion of your orders that generate a conversation.** With some of our leading customers as many as 75-90%+ of orders can generate questions. A typical rate falls at around 40%. Where do you fall?

2. **Consider the makeup of those conversations.** With some smart management, where would the business benefits lie? In terms of potential:
   - Cost savings through reducing returns, for example?
   - Revenue generation from up-sell or cross-sell?
   - Insights into improvements in the customer experience?

Once you have the actual subject matter of customer conversations in hand, there’re any number of business opportunities to be had.

This is what the **ROBIN Program** is here to help you do.
06 Getting started with AI and bots

1. Keep it real!

Focus on tangible use cases. Let’s see what is being solved successfully, for whom, and with what product portfolios. Then we can make an informed choice on where to focus. Don’t believe the hype.

2. Start experimenting with marketing/assistant bots

Virtual assistants cater towards new shopping behaviours, they can generate additional revenue and are easy to build. Go experiment!

3. Focus on CX gains, not just cost-cutting

By looking at the actual content of the questions you receive, you will gain insight into how to best optimise your CX. This can also free capacity to shift your service focus from after-sales to pre-sales, where it generates much more business value.
If you are serious about meeting increasingly high shopper expectations and capitalising on AI and advanced tech to beat the competition with service, here’s three things to consider:

1. **Build a sustainable customer service operation**

   Those customer service managers who focus on delivering a strong end-to-end customer experience can integrate front- and back-end eCommerce processes to create significantly more business value than a ‘service-only’ focus.

   Building a sustainable service operation begins by embedding, then monitoring, your customer service key performance indicators. Once under control, you will need a service vision and ambition.
2. Start getting structured about data and content

Thinking structurally about business rules, data, and content is the key to capitalising on advanced tech. Introducing the concept of business rules across your company will help you build a strong foundation.

We also know from experience that there are loads of learnings to be had from analysing shopper conversations. These insights can be used to optimise both CX and operations — tangible proof of the benefits of thinking structurally and tackling root causes rather than symptoms.

3. Automate and Augment

Currently, there is a strong focus on automating the front-end of customer service. And yes, identifying repetitive, low-value tasks that can be automated is a good way to improve efficiency and productivity.

Augmentation, however, means equipping customer service staff with increasingly intelligent tools with valuable data and information — effectively turning them into super-reps. We recommend that’s where you focus on developing use cases, and look to scale.

And finally, our last piece of advice...
08 Never underestimate a human
In eCommerce, we know that customer experience is both hugely important — and tough to manage.

Our shoppers' journeys are complicated. And they’re only going to get more complicated over time. More competition, more tools, more channels, more content... Just more.

So many touch-points... so many customer questions ... especially if you have a broad range of products.

For a shopper, service conversations are ‘make or break’ moments with your brand. These instances are ‘make or break’ moments for the customer relationship.

That is why we believe that service conversations are critical touch-points in the entire customer experience.

Nowadays only the most skilled human reps can navigate this complex environment while delivering great customer service with a smile.

Current technology is not capable of matching this level of service, at least just yet. And it may never be.

As more and more bots appear online, and customer service interactions increasingly become automated, personal service will become an even more scarce commodity than it already is... and therefore; even more of a USP.

Elon Musk, Tesla and SpaceX CEO, isn’t everyone’s cup of tea. But as one of the world’s biggest advocates of advanced tech, he said something very interesting recently;

“Humans are underrated.”

We wholeheartedly agree.

Sure, robots rock.

But you should never underestimate a human.
We are ROBIN. And we are on a major mission

We take raw, ambitious commerce customer service reps and turn them into super-productive kick-ass teams that — ultimately — help build an amazing customer experience for your retail brand.

The Program has everything you need, and nothing you don’t — to get you on the right track, fast! It includes a Conversation Console to manage customer conversations, a Performance Plan built around the ROBIN proprietary KPI Framework to continually improve customer service, and a dedicated Expert Coach to guide decision-making along the way — all for a fixed price.