

THE FUTURE OF VOICE ASSISTANTS IN THE NETHERLANDS

To what extent should voice technology improve in order to conquer the Western European market?

GAME CHANGERS



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Go to a random marketing, trend watching or tech website and I guarantee you will come across the device that is going to change our shopping behavior, homes and lives in the near future: Voice assistants. Several reports predict that in 2017 sales of these smart speakers will run sky-high: From 24 million sold Echo's and Google Homes in 2016, to 56.3 million sold smart speakers in 2017. This makes smart speakers the fastest growing consumer tech.*

Amazon was the first to launch a smart speaker in the US in 2014 and is leading the category with 71.9% of the market. The US is taking the majority share of the market and shows a positive consumer acceptance overall. The question is: to what extent should voice technology improve in order to conquer the Western European market as well?

Smart Speaker Market Share Installed Base 2017

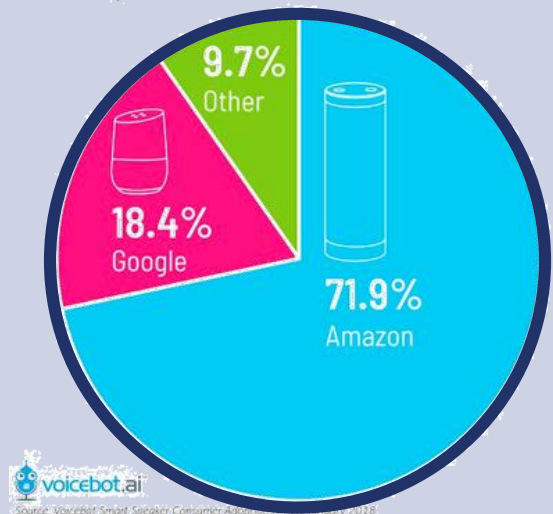
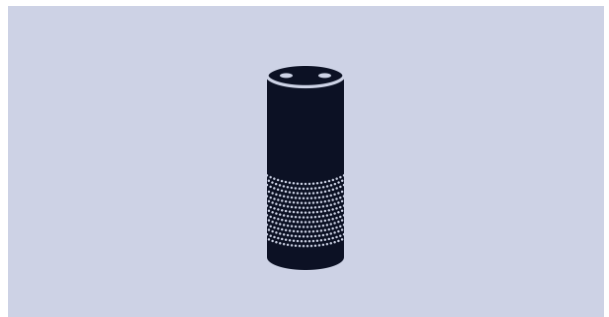


Figure 1. Amazon is leading the smart speaker category (source: www.voicebot.ai)

To answer that question, we analyzed 75,000 user reviews of the first generation Echo. What did users like? What annoyed them? In other words: what should remain the same and what should be improved?



<https://www.prnewswire.com/news-releases/the-2017-voice-report-predicts-more-than-24-million-amazon-echo-and-google-home-devices-will-be-sold-this-year-300394431.html>)

(<https://www.canalys.com/newsroom/smart-speakers-are-fastest-growing-consumer-tech-shipments-surpass-50-million-2018>).



What users say about the Echo

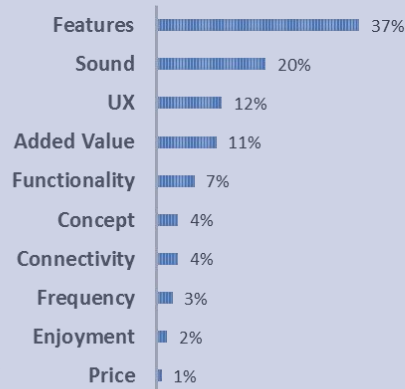


Figure 2. 10 categories where Echo users write about in the reviews

BUILD ON THE KEY FEATURES

People love the ‘features’ of Echo. It is what they talk about most in the reviews. Features that are so far particularly liked by users are the ability to play music or audio books, to set timers and alarms, to get morning briefings with updates on the weather, news and traffic, to verbally add items to a shopping list and to ask questions

“I use my Amazon Echo for mostly playing music, telling me the forecast and adding items to my shopping list.”

“My wife and I both love listening to music, while we relax in bed before going to sleep, and then nature sounds while we sleep. She also makes a great alarm clock. After my morning shower, I ask Alexa to give me my morning briefing while I get dressed.”

“The features I use the most are setting timers to keep track of when to take medications, listening to prime playlists, audio books from audible, and, last but not least, asking Alexa to spell out words since I'm an awful speller.”



CHANGE NOTHING ABOUT THE SOUND

The second largest topic in the reviews is the sound. Users are positively surprised by the quality and loudness of the sound

“One of my favorite things to do with my Amazon Echo is to play music. The speakers are of excellent quality. I was expecting the sound to be ok but not expecting it to sound as good as it does.”

“The speaker is surprisingly good - I can control the loudness by just saying 'Alexa, louder' and the volume can go rather loud. I did not notice any distortion and happy that the sound has a good bass, with not too much treble.”

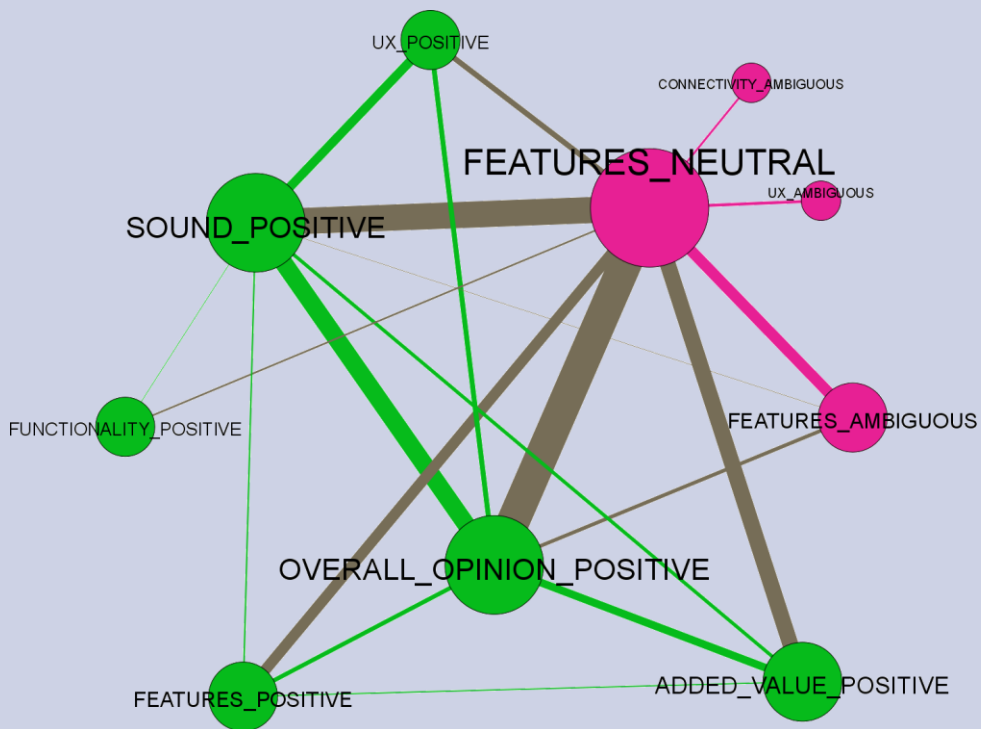


Figure 3. The network analysis shows that the sound, just as the features, is strongly linked to the overall positive opinion that users have.



KEEP CONNECTING ON A PERSONAL LEVEL

When categorizing all review content, we found a cluster of mentions which describe the added value of the device in their lives. Users speak of their voice assistant as a human being and even as a close friend or family member. Users let Alexa entertain their kids or themselves and, for some, she is the first one they speak to when waking up and the last one when going to sleep. Apparently, Alexa fulfills a certain need that until now could only be fulfilled by humans or animals. Thus, for most users, Alexa is much more than a tech device.

“She’s a 24/7 personal assistant without the attitude and judgmental tone.”

“A great addition to my life.”

“Alexa is near my bed and is my best friend.”

“She is really becoming part of the family over time.”

“I am grateful for this technology and I look forward to a long and beautiful relationship with her!”

This category defined as ‘added value’ is very impactful. A driver analysis reveals it has the highest impact why users rate the Echo with five-stars.



Explanatory power for predicting a 5 ★ Rating

Explanatory power for predicting a 1-4 ★ Rating

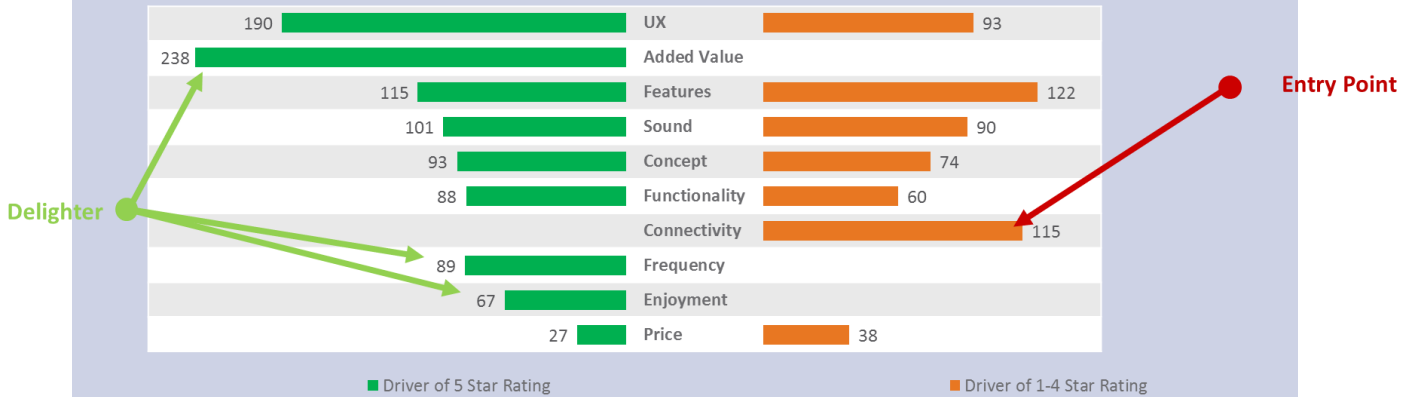


Figure 4. The driver analysis shows that Added Value, Frequency and Enjoyment have the most impact on five star ratings, Connectivity on the lower (1-4) ratings. Driver scores are indexed to an average influence (= 100)

MAKE IT EASIER TO SET UP AND CONNECT

Main point of frustration is setting up the device and connecting to the internet and smart home solutions, which, not surprisingly, is the number one issue explaining a 1-4 star rating.

“I was so looking forward to receiving the Amazon Echo but I spent at least 4 hours a day and double that on the weekend for 7 days trying to connect this device to my WiFi with no luck.”

“Just received today and cannot set up. I’m a pretty intelligent person. This shouldn’t be this hard. No instructions in box. Follow the Alexa App. Should be simple. However, each time it tries to connect to my home WIFI, which I know works, it gives a weird error message and says to log out and try again.”



IMPROVE VOICE CONTROL

What still needs improvement is Alexa's capability to 'listen' to people with a strong accent or in an environment with background noise. As Alexa's features and functionalities fully rely on voice, issues with voice control can be a huge frustration:

"Another battle I had with Alexa was that I assumed she could hear me at all. It's quiet in my small house, and my office is just down the hall from her, but often I got no response to my voice commands."

"If a fan or heater is on making a hush sound Alexa goes deaf! You have to literally yell 'Alexa play Coldplay on Spotify' for it to hear you."

Alexa is worse for general conversations like some claiming it to be their companion - absolute crap. Most of the times it is confused and you'd hear 'I don't understand the question I heard'.



IN CONCLUSION

So there are a few important things that we can learn and conclude from the user feedback on Voice controlled devices like Amazon Echo.

- The experience of Voice, interacting with a smart device by simply speaking to it, has the power to create a strong personal connection with the user. The feeling of having a digital 'friend' in your house who understands you and can make your life easier is very powerful.
- The entertainment function of playing your favorite music on a speaker with a high sound quality is the first layer to build on a positive user experience. However, Spotify is currently not supported in the Netherlands, you need to buy Amazon's own streaming service.
The basics that enable the device to function, like connectivity, setup and voice control leave room for further improvement.
- Consumer adoption of smart speakers that support new foreign languages will strongly depend on the quality of the voice assistant. Can the voice technology cope with local accents? In a small country like the Netherlands we have at least 3-4 local accents that could be difficult for a machine to understand. Is the AI ready for that? If Alexa doesn't get it right, you start losing faith. When will Alexa be ready to understand and speaking Dutch, we don't know yet. We're very curious what will happen when Google will launch GoogleHome with a Dutch speaking voice assistant later this year.



METHODOLOGY

To understand how consumers experience the new category of Voice controlled devices, we analyzed reviews of almost 75,000 US users of the first generation Amazon Echo. The review data was categorized with Natural Language Processing (NLP) technology that is based on recognizing linguistic patterns in unstructured text (semantic network analysis). Which topics with the most impact on granting the product with a five-star rating was revealed by a random forest driver analysis (regression analysis). A qualitative deep dive on the verbatims was added to give more context how users talk about their experience. This case study is an example of Ipsos new Social Insights portfolio to use rating & review data for product intelligence.

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