



PATRICIA GOMES FERNANDES

STRATEGIES FOR THE SUCCESSFUL USE  
OF DIGITAL VOICE ASSISTANTS

# VOICE SEARCH MARKETING

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**Strategies for the successful use of  
digital language assistants**

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## Abbreviations

AI	Artificial Intelligence
API	Application Programming Interface
ASR	Automated Speech Recognition
DL	Deep Learning
GPS	Global Positioning System
HTML	HyperText Markup Language
IVR	Interactive Voice Response
ML	Machine Learning
MMM	Modern Merchandizing Methods
NLU	Natural Language Understanding
SEA	Search Engine Advertising
SEO	Search Engine Optimization
SMART	Specific - Measurable - Achievable - Reasonable - Time Bound
SSML	Speech Synthesis Markup Language
STT	Speech-to-Text
TTS	Text-to-Speech
VEO	Voice Engine Optimization
VUI	Voice User Interface

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# 1 Introduction

This chapter presents the research goal and the resulting problem definition of this work. Finally, the procedure and the structure of this work are explained.

## 1.1 Problem definition

Digital voice assistants have been spreading rapidly in American households since 2015 and have also been more and more widespread in Germany since 2017. Results or confirmations are in some cases no longer displayed visually, but with most voice assistants for the home, called 'Home Assistants', only verbally reproduced (e.g., Amazon Echo, Google Home, Apple HomePod, etc.). Most of these devices have neither a screen nor a keyboard, so that the only interaction possible is through human language. Around a third of Germans between the ages of 18 and 69 were already using a digital voice assistant in 2017.<sup>1</sup> According to current surveys and forecasts, the number of users of digital voice assistants worldwide will continue to grow. In 2016, the market intelligence company Tractica predicted that there will be around 1,831 million users worldwide by 2021.<sup>2</sup> Google CEO Sundar Pichai claims that 20% of searches are currently made using voice searches on Android devices.<sup>3</sup> According to Gartner, 30% of web browsing sessions should be without a screen by 2020.<sup>4</sup>

Among the top 5 digital voice assistants is Amazon's Alexa, which, according to statistics from IHS Markit, had the largest market share in 2017.<sup>5</sup> Users of digital voice assistants are not only able to start a music playlist with a voice command, but can also call up almost any information from the Internet by voice input. Among other things, the new user interfaces enable hands-free ordering of products and services, as well as controlling the 'smart' home. Thanks to the convenience of voice control, digital voice assistants are becoming more and more popular.

Meanwhile, the increasing popularity of digital voice assistants is unsettling product providers. The results of the voice search are often limited to a single result in order not to overwhelm the user. In addition, the results are becoming increasingly

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<sup>1</sup> Cf. Splendid Research GmbH (2017), p. 8.

<sup>2</sup> Cf. Tractica (2016): <https://de.statista.com> (As of 30 May 2018).

<sup>3</sup> Cf. Gentsch (2018), p. 171; cf. Helft (2016): [www.forbes.com](http://www.forbes.com) (As of 30 May 2018).

<sup>4</sup> Cf. Forni (2016): [www.gartner.com](http://www.gartner.com) (As of 30 May 2018).

<sup>5</sup> Cf. IHS Markit (2017): [de.statista.com](http://de.statista.com) (As of 30 May 2018).

personal, making it more difficult to acquire new customers and increase market share. For example, if someone asks, 'next soccer game', the results may vary depending on the user's team preference. Similarly, when searching for everyday products, the previously ordered article is suggested for re-ordering. This makes the customer experience much more convenient, but from the point of view of marketing and sales, questions are increasing as to how the visibility of a product, a brand or a company can be guaranteed under these circumstances. Voice search is a challenge, especially for companies that already have difficulties in finding themselves on the first page of search results in search engines.

Smaller retailers in particular who sell their products on Amazon are unsettled by the new market developments. By my own two years of experience in the Amazon digital video games and software team, frequently asked questions from vendors are 'What do I have to do to get Alexa to suggest my product?' Or 'Can Alexa help me with customer loyalty? If yes, how?'. Similar questions can also be found in the Amazon Seller Central Forum, where third-party providers can exchange ideas with other sellers.<sup>6</sup> With other digital voice assistants, too, the question arises as to how they choose their answers. The consequences of the spread of digital voice assistants for brands and product providers are therefore difficult to predict. In particular when searching for products on Amazon, vendors fear that voice assistants will not allow the display of advertising messages, as is currently the case on desktop and mobile devices. Knowledge of the internal functioning of voice-controlled systems is limited and not very widespread. The technical properties of Alexa are kept strictly secret by Amazon and the literature is often limited to the development of chatbots or Alexa-like voice computers. There is little technical literature that provides information on how companies can become 'discoverable on these new user interfaces or how brands will interact with their customers in the future.

## **1.2 Research goal**

The aim of this work is the creation of recommendations for manufacturers and product providers, which should contribute to the achievement of marketing goals in the era of digital voice assistant. Manufacturers who would like to have their

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<sup>6</sup> Cf. SellerCentral (2017): [sellercentral.amazon.com](https://sellercentral.amazon.com) (As of 30 May 2018).

products mentioned by voice assistants such as Alexa should receive information or instructions on how they can achieve this goal.

The main goal of this work was divided into the following sub-goals:

- Goal 1: Summary of the basics of marketing. The aim is to consider the role of marketing and how new technologies influence marketing strategies in order to later deal with what marketing can look like in a future with voice-controlled user interfaces.
- Goal 2: Analysis and evaluation of search engine optimization as an online marketing tool. The methods of this marketing activity should be presented so that it can also be assessed whether this instrument can still contribute to the achievement of marketing goals in the future.
- Goal 3: Collection of information about voice-controlled systems and a description of how they work. This information is intended to determine the effects of voice technology on marketing and thus contribute to the marketing literature. The aim is to show that certain marketing activities will remain relevant even in a future in which voice-controlled devices will change the interaction with web and app content.
- Goal 4: Completion of the recommendations for action to generate sales in the retail business in the context of voice search. Finally, the knowledge gained is to be summarized with regard to the needs of the manufacturer. The aim is to give vendors the opportunity to find answers to their questions and to get to know the necessary measures to achieve their business goals.

### **1.3 Structure of the work**

The structure of the work is inspired by the concept of the sales funnel. This is a sales tool that is used in particular in the B2B area and in sales to, among other things, map the various stages in the sales process.<sup>7</sup> A similar funnel is known in online marketing under the term 'conversion-funnel'.<sup>8</sup> The funnel metaphor

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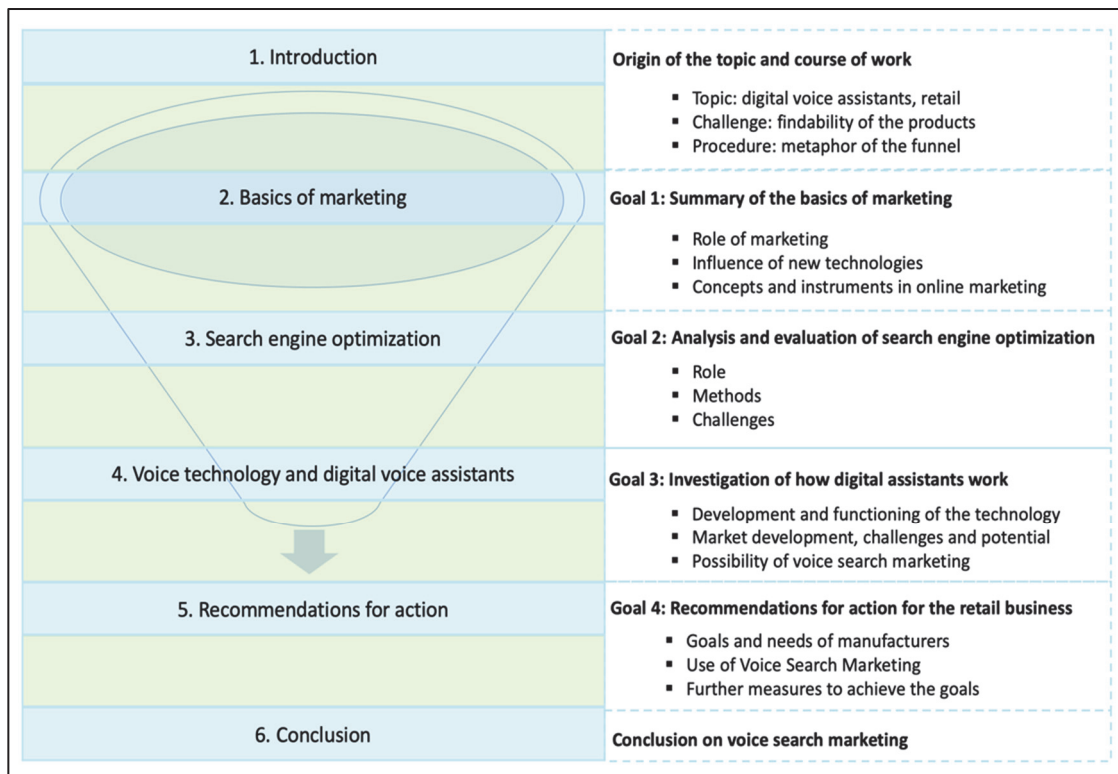
<sup>7</sup> Cf. Kunz (n.d.): [www.oberholzerkb.ch](http://www.oberholzerkb.ch) (As of 24 August 2018).

<sup>8</sup> Cf. Krüger (n.d.): [www.conversionboosting.com](http://www.conversionboosting.com) (As of 24 August 2018).

generally describes how potential customers are gradually selected until a deal is successfully closed.<sup>9</sup>

In this work, the idea of the funnel was adopted in order to gradually move from the basics of marketing to a presumably new branch of online marketing.

Using the metaphor of the funnel and the goals of this work, a subdivision into individual phases was carried out, in each of which work packages were derived. The following figure gives an overview of the structure of the thesis (see Fig. 1).



Source: own illustration.

Fig. 1: Structure of the work

In the first chapter the basics of marketing are summarized and thus in particular the tasks, goals, concepts and instruments of online marketing are recorded. Then the instrument of search engine marketing will be examined in more detail and its challenges highlighted. Subsequently, the functionality of digital assistants is determined in order to be able to evaluate the challenges and potential of these new user interfaces and to develop new tools for marketing.

Finally, the questions from Amazon vendors are taken up and answered using the newly gained knowledge. The results are general recommendations for action for

<sup>9</sup> Cf. Online Marketing Lexikon (n.d.): [www.unternehmer.de](http://www.unternehmer.de) (As of 24 August 2018).

manufacturers who offer their products through retailers such as Amazon. In addition, with this work, a first contribution is made to a possibly new instrument of online marketing: Voice Search Marketing.