Operation and Interaction of Software Used in Digital Distribution Channels in Direct Marketing of Hotels

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Abstract

With the development of technology, the ways of doing business are changing, and digital transformations are taking place in the activities of businesses. At this point, digital transformation is reflected in the service businesses in two ways. The first of these is the digital transformation in the operational activities of business management, while the second is in the form of technological innovations offered to guests. To this end, this research focuses on the digital transformation in the operational activities of hotel businesses and aims to determine the operation and interaction of the software offered in digital distribution channels for direct marketing of hotels. In this direction, 57 software companies that provide the relevant software services to hotels in Turkey were accessed, and content analyzes were made on the websites of the relevant companies. In light of the data obtained, the operation chart for the interaction of the software that plays an active role in the direct marketing of the hotels was created and explained by presenting sample quotes from the websites of these businesses. It is expected that the research can contribute to the literature for digital marketing courses in the tourism and hotel management departments of universities, as well as reveal the operation of the interaction of the software in question.

Key words: Digital Tourism Services, Booking Engine, Channel Manager, Cloud PMS, Reputation Manager, Hotel Rate Scanner

Introduction

Thanks to the developed use and spread of the internet, almost all trade areas have been affected by such a progress. Tourism is one of the most affected areas by internet technologies, and travel agencies succeed the airline companies in adopting internet technologies (Temizkan and Özhasar, 2020:118). Accordingly, there are some improvements in the tourism industry together with the changes in information and communication technologies. Digital technology applications based on social media, the internet, cloud computing, artificial intelligence, virtual reality, and other related internet infrastructure in tourism differentiate individuals' demands, expectations, preferences, and experiences regarding the available products (Sayın and Karaman, 2019:22). These developments have led to the digital tourism era in the tourism industry (Dülgaroğlu, 2021:7).

Digital transformation in tourism can be defined as including the internet of things, artificial intelligence, customer relationship management, central reservation systems, mobile systems that allow last-minute room reservation and check-in, destination management systems, digital telephone networks, smart hotel management systems, tourist and tourism smart card systems, smart tour guide systems, smart travel agency systems, virtual reality, and mobile applications that make the life of the personnel easier (Atar, 2020:1646). The innovations brought by digitalization have led to the emergence of new needs and, accordingly, new services in hotel marketing, as in all other areas. This situation has also resulted in new digital service businesses for marketing in the hotel industry.

With the advancement of technology, its use in hotels is applied in two dimensions: "management and operational processes" and "services offered in guest service areas" (Lee et al., 2003). This research, which focuses on technological innovations in management and operational processes, aims to determine the functioning of digital distribution software developed for direct marketing channels of hotels. Although there are various studies on direct marketing of hotels in the

literature (Demirciftci et al., 2010; Weidong, 2010; Shegg et al., 2013; Ersoy and Gülmez, 2013; Inversini and Masiero, 2014; Masiero and Law, 2016; Parvez et al., 2018; Pelsmacker et al., 2018; Ateş and Yurtlu, 2019; Saçlı and Yurtlu, 2020; Mathews et al., 2021), no study was found mainly based on the interaction of software in direct distribution channels with each other.

Depending on the development of technology, the software developed by digital tourism businesses for direct marketing of hotels is increasing and their usage levels are getting more and more accepted among tourism managers. In addition, it is seen that the software in question focuses on transforming the complex structure in the online marketing of hotels into a simpler structure, thus enabling hotels to increase their productivity in a sustainable way (Yurtlu, 2021). In the light of the data obtained within the scope of the study, it is predicted that the operation and interaction that can be determined between the software will be a guide for understanding the online tourism marketing structure, especially for hotel managements, online travel agency officials and tourism academics. At this point, it is predicted that the study will contribute to the literature both sectorally and academically.

Within the scope of the research, software companies that provide services for digital distribution channels in the direct marketing of hotels in the tourism industry in Turkey were investigated. In this context, as a result of the content analyses made on the websites of the companies in question, the operation of the software related to the digital distribution channels that play a role in the direct marketing of the hotels was researched. In the study, first of all, information about the current situation of the tourism industry in the world, the appearance of the digital tourism market in the world and Turkey, the appearance of the hotel industry in the same context, and online reservations are presented. Then the method, findings, and results of the research are demonstrated.

Conceptual Framework. An Outlook for the Digital Tourism Market. With the effects of the COVID-19 epidemic, consumers have turned to digital shopping channels more as they stay at home. In 2020, more than two billion consumers purchased goods and services, and the total amount of e-retail sales worldwide exceeded $4.28 trillion. This figure is estimated to reach $5.4 trillion in 2022. According to 2021 e-commerce data, online shopping comes first among consumers' online activities, and it is predicted that Turkey will be the the first country in terms of retail e-commerce development with a compound annual growth rate of 20.2% between the years 2020-2024 (Sezgin and Yurtlu, 2021:1758).

The market size of the international online travel agency industry reached $432 billion in 2020. This figure is estimated to reach approximately $561 billion in 2021. By 2025, the market is expected to reach $833.5 billion with a compound growth of 10% (Statista, 2022a). The online travel market includes services such as online travel agencies (OTA) and travel review websites that allow tourists to book online. However, tourists seek more digital experiences while traveling. Digital services can consist of options such as virtual tours of a requested accommodation or destination, as well as a mobile integration solution for checking in to a hotel room. The coronavirus pandemic played a key role in accelerating the digitization of this industry, with hygiene concerns and social distancing making consumers more willing to use digital services rather than face-to-face services. A study conducted in July 2020 revealed that more than 60 percent of tourists worldwide believe in the importance of technology to minimize human interaction while traveling (Statista, 2022b).

Digital environments allowing individuals to share their experiences with other individuals have a crucial impact on the spread of developments with technology throughout the tourism field (Sezgin and Yurtlu, 2021). Digital tourism refers to the travelers' use of digital tools during the overall tourism experience. For example, booking travel products online can be considered part of this digital process. Reviewing travel destinations, accommodations, and restaurants alongside online reservations appears to be another important aspect of the overall digital tourism experience.

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Tourists are increasingly interested in reading and posting online travel reviews and tips. One of the most well-known travel review websites, the total number of user reviews on TripAdvisor, has more than quadrupled from 2014 to 2020. The fact that in January 2021, TripAdvisor was the most visited tourism and travel website worldwide confirms this argument (Statista, 2022b).

Social media websites also play a fundamental role in the travel industry. Today, influencers and companies use social media as a marketing tool as travelers use them to share online content about their trips. For example, with approximately 39 million Instagram users "National Geographic Travel" was the most followed travel influencer on Instagram worldwide as of May 2020 (Statista, 2022c).

An Outlook for the Hospitality Industry in the World and Turkey and Online Reservations. The increasing pace of technological innovation in industries is a catalyst for the digitization of the hospitality industry. In 2019, the market size of the hotel industry worldwide reached its peak with $1.47 trillion. As a result of the Covid-19 pandemic in 2020, the market size decreased to 610 billion dollars, and it is estimated that the market size will increase to approximately 950 billion dollars in 2021 (Statista, 2022d).

Monitoring key performance indicators is a common way to measure the success of the hospitality industry. These indicators include revenue per available room (RevPAR), average daily rate (ADR), and occupancy rates that have grown over the past decade (Statista, 2022e). For example, according to the "2021 State of the Hotel Industry Report" of the American Hotel & Lodging Association (AHLA), while the average hotel occupancy rates in the United States were 66% in 2019, it experienced a historical decline with 24.5% in April 2020. The average occupancy expectation for 2021 increased to 52.5%. This situation decreased by almost half in hotel room revenues to $84.6 billion in 2020. In 2021, with the recovery after the pandemic, an increase of $25.9 billion is expected, 34% below the pre-pandemic levels, while it is predicted that room revenues will recover marginally in the form of $144 billion in 2022 (AHLA, 2021).

According to the hotel occupancy data report prepared in cooperation with the international data analysis company STR Global and the Hotel Association of Turkey (TÜROB), the average occupancy rate of European destinations decreased by 51.7% to 38.9% in September 2020, while the average room rate was €86.4, down 29.9%, and room revenues were €33.6, down 66.1%. According to tourism statistics for 2020, 41.9 million arrivals happened in Turkey, with a decrease of 48.2% and a total of 95.3 million overnight stays with a decrease of 54.9%. The average length of stay in hospitality businesses was 2.28 days with a decline of 12.64% compared to the previous year (the average length of stay in 2019 was 2.61), and the total occupancy rate was 22.45%, with a decrease of 58% (2019 occupancy rate was 53.48%). In addition to these, as of 2021, the total number of accommodation facilities in Turkey has reached 12.827 (total bed capacity: 1.596.667) (Göral and Yurtlu, 2021:89).

In a study conducted on the digital strategy areas that managers in the travel and hospitality industries would focus on the most for the next 12 months in 2020, it was concluded that 43% of the participants would focus on digital analysis. Besides, the study suggested that 23% of the participants would focus on machine learning and artificial intelligence (Statista, 2022e). About 27% of executives at organizations in the international travel and hospitality industry surveyed said they have a cross-functional team for digital transformation, while 16% proposed they have a third-party partner (Statista, 2022f). In the research conducted with the cooperation of Skift and Amazon Web Services in 2020 and involving nearly 1,000 senior executives, 36% of the executives reported that they would make their new investment decisions on software and technology, while 26% stated that they would procure software and technologies from service providers. (Skift and Amazon, 2020). 77% of executives noted that cloud technologies would help them improve customer experiences and optimize operations (T.R. Ministry of Technology and Industry, 2021). In Yurtlu's (2021) research in a relevant context on the determination of cloud computing systems used in the

online marketing of hotels, the current services offered to hotels by IT companies are "Content Creation," "Distribution Channels Management," "Operational Management," "Social Networks and Reputation Management," and "Revenue Management" categories (Yurtlu, 2021).

According to the report of the "Online Distribution Channels" research conducted by the European Association of Hotels, Restaurants, and Cafes (HOTREC) in 2018 with the participation of more than 3,400 hotels, a comparison of the European and Turkish hotels in 2015 and 2017 was made by the Hotel Association of Turkey (TÜROB, 2018). Accordingly, the share of reservations received by hotels across Europe through direct communication tools such as corporate websites, e-mail, and telephone decreased from 52.9% in 2015 to 52% in 2017. However, the share of hotels' corporate websites in direct reservations increased from 7.7% in 2015 to 9% in 2017. In reservations received from other online distribution channels such as online travel agencies and social media, the share of 26.4% in 2015 increased to 29% in 2017. The percentage of reservations received through direct communication tools such as corporate websites, e-mail, and telephone at hotels throughout Turkey increased from 43% in 2015 to 50.1% in 2017. In reservations received from other online distribution channels such as online travel agencies and social media, the share of 20.6% in 2015 decreased to 17.3% in 2017. Additionally, it was reported in the comparison that the rate of reservations for hotels in Turkey consisting of tour operators and travel agencies was 26.1% for 2013, 20.8% for 2015, and 15.4% for 2017.

According to the research findings above, while the rate of reservations received by European hotels from direct distribution channels is decreasing, it is increasing for Turkish hotels. While the share received from other online distribution channels is growing in European hotels, it is falling in Turkish hotels. Besides, the reservations received from tour operators and travel agencies for hotels in Turkey decreased significantly. Another issue emphasized in the same study is about search engine integrations of hotels. Although it was determined in previous studies that nearly half of the hotels knew about integration with travel meta-search engines (Meta Searchers), in a recent study, it was observed that approximately 80% of the participants were aware of these distribution channels and 41% implemented the relevant integrations in their businesses (T.R. Ministry of Technology and Industry, 2021).

When the development process of businesses that provide software services in the direct digital marketing of hotels in tourism is examined, it is indicated that these businesses have started to emerge, especially since the 2010s. From this perspective, the development of internet technologies in quality and speed factors has a strong effect on the hospitality sector. When it comes to the 2020s, the enterprises that follow the dynamics of the industry effectively and accordingly develop new software products come to the forefront in the tourism industry compared to their competitors. For example, the Hotel Tech Report website, which is a world-leading leader in information technologies in tourism, centrally manages the online distribution channels for the use of hotels in 2022 and provides the best companies in the world in terms of online channel manager software, which allows them to be managed digitally through a single platform reported as follows, respectively: SiteMinder, Cloudbeds, RateGain, Profitroom, D-EDGE-Smart, InnRoad, RateTiger, SmartHotel and HotelRunner (HotelTechReport, 2022). It is significant to note that HotelRunner is a domestic digital marketing business operating in Turkey.

In light of the literature review, hotels attach more importance to direct distribution channels than before with the digitalization of tourism over time. Besides, new service understandings brought by the digital era are getting richer by diversifying in the field of hotel management day by day. Additionally, some companies that provide software services in the tourism industry in Turkey have achieved success at the international level. Companies involved in digital distribution in hotel management and the services offered to them focus on simplifying the complex functioning of distribution channels. Hence, difficulties are encountered both in the hotel industry and academia in understanding the constantly renewed, dynamic, and complex structure in digital distribution

channels of hotels (Yurtlu, 2020). This study is expected to contribute to the tourism literature to understand the complex structure in question more easily. The primary objective of the research is to reveal the operation and interaction of software that contributes to the digitalization of hotels in direct marketing channels, depending on the digitalization process of tourism. However, the supporting aim of the study is to determine the subjects that are expected to be included in the educational materials of the tourism and hotel management departments of universities.

Methodology

Qualitative research is the research that allows to examine the problematics that are the subject of researches in depth and with all their dynamics according to quantitative researches (Baltacı, 2019). It has been determined that it is not possible to reach the detailed data aimed to be obtained for the scope of the study with quantitative research approaches. For this reason, a qualitative research design was created and the websites of the companies included in the research sample were examined by content analysis method.

Content analysis is defined as a research technique used to examine any observed communication content in a systematic, objective, or numerical way (Wimmer and Dominick, 2000). This technique, which also includes internet communications, is widely used in research in the field of social sciences (Marangoz et al., 2012). Since this research aims to determine the interaction and operation of digital distribution tools that play a role in the direct marketing of hotels, the content analysis technique was preferred in the study. In accordance with the research objective, the survey model was used in the study. The survey model describes an existing situation without changing it (Bayram and Yaylı, 2009).

The data targeted in the research were obtained from the websites of the companies determined within the scope of the study. Ethics committee approval was not required for the study.

Research Population, Sample, and Data Collection. The research population consists of businesses that provide software for digital distribution channels in the direct marketing of hotels in Turkey. The study sample involves the businesses that offer software services for five basic digital distribution applications (reservation module, channel manager, cloud PMS, online reputation manager, and rate scanner for competitor hotels (Yurtlu, 2020)). In this context, businesses providing five basic digital distribution software services for direct marketing of hotels were taken as a basis in determining the research sample.

As a result of extensive searches on the Google search engine using keywords related to the software in question, a total of 57 businesses with offices in Turkey were accessed as of February 2022. In this context, it is considered that all businesses that provide software services for digital distribution channels in the direct marketing of hotels in Turkey have been reached in the research. The identified companies and the services they provide are presented in Table 1. The content was scanned on the websites of the determined businesses, and information about the functioning of the services offered was obtained and analyzed. Figure 1 presents the operating scheme formed in light of the collected qualitative data. Within the scope of the research, information about the software of the companies that have offices in Turkey and that offer the relevant software on their websites is presented and described in the findings section with direct quotations.

The five main digital distribution tools researched in the study are "Online Reservation Module," "Channel Manager," "Cloud PMS," "Online Reputation Manager," and "Rate Scanner for Competitor Hotels" applications which Yurtlu determined in his research with the company officials that provide software services in digital marketing of hotels in 2020 (Yurtlu, 2020). The functioning and contributions of these applications in the operational processes of the hotels are explained below (Yurtlu, 2021):

Online Reservation Module: Hotels can make room sales directly in their marketing activities within the corporate website services in reaching their potential guests directly, thanks to the online reservation module software. In this way, hotels can both increase their income and save time in the reservation process by disabling other intermediaries in room sales. In addition, they can offer special promotions to their guests through reservation modules, depending on their sales policies. Moreover, hotels can increase the number of reservations made directly through reservation channels by integrating online reservation modules with meta-search platforms (Meta Searchers) such as TripAdvisor, Kayak, and Trivago. Additionally, they can market their online reservation modules on social media channels through software provider businesses that have integration with online travel agencies such as Booking.com. An example of this is the "Facebook Button" application, which allows hotels to receive reservations from the Facebook social media channel developed by Booking.com.

Channel Manager: The approach to obtaining returns through efficiency management, which is an important part of the management process of accommodation establishments, is a sales and marketing approach that ensures that the service reaches the right guests at the right time, at the right price, and through the right channel. Hospitality businesses can quickly control their prices and quotas with equal price understanding in central inventory and online sales channels by connecting to online travel sites, including their reservation modules, using secure connections with channel manager software, centrally and with a single cloud application.

Cloud PMS: The software allows the hotel management system (PMS) service to be offered in cloud-based servers. There is no initial investment cost in the cloud-based PMS service. Cloud-based PMS service can be used via mobile devices and computers via internet connection. In addition, there are no costs such as servers, server licenses, backup, and virus software that hotels have to renew every few years. In classical hotel management systems, almost every function can also be provided in cloud-based PMS services. With these functions, cloud PMS software generally includes integrated online reservation modules and channel manager software, which possesses vital roles in the digital distribution of hotels.

Online Reputation Manager: Hotels can dynamically monitor their online presence and create strategies in this direction thanks to the reputation manager software. To this end, services such as management and reporting of review sites, collecting ethical and fast online reviews, providing practical survey solutions to guests, and answering comments on behalf of hotels are included in this category. Besides, they can make guest comments and opinions on internet comment sites visible on corporate websites by means of integrating comment sites through such software. For example, they can directly present the views on experience sharing platforms such as TripAdvisor with online reputation management software to their visitors on their websites. It is aimed here that visitors can complete their reservations on the hotel's corporate website without leaving its website. In addition, reputation manager software reports online or in-house comments and opinions about the hotel to the hotel management by making semantic analyses. In this way, hotel managers can both see the data about their current situation and gain a competitive advantage by improving their service quality accordingly.

Rate Scanner for Competitive Hotels: Competitive pricing is one of the pricing strategies frequently used by hotels (Ateş and Yurtlu, 2019). Thanks to the rate scanner software, hotels can instantly track the online sales prices (Business to Consumer-B2C prices: prices posted to the end consumer) of the competing businesses they have determined and compare them with their prices. Thus, by analyzing the prices of their competitors in online sales channels, they can apply their strategies to create the most accurate prices in maximizing their profitability and occupancy.

In light of the previous information, online reservation module software is regarded as a significant distribution channel software service for accommodation businesses to reach potential guests directly. On the other hand, channel manager software, including the reservation module,

plays an active role in distributing hotel price, capacity, and availability data to online travel portals. On the other hand, Cloud PMS software plays a part in the marketing distribution channels of the hotels, as it integrates both the online reservation module and the channel manager software.

Today, social networks can be used as a marketing tool (Kara and Coşkun, 2012). The intermediary role of social networks in the marketing of hotels can be examined in two ways. The first is the applications that emerge as the sales-oriented use of the online reservation module, such as the Facebook Button. The second is in the form of comments, opinions, and shares of guests who experience the service on social networks (such as Facebook, Instagram, TripAdvisor, and Google Business Listing). At this point, hotel management can measure the quality of their services in online social networks and make the necessary improvements in this direction. Thus, guests consuming the services offered can become a hotel marketing tool by sharing their experiences, opinions, and comments on social networks (Ateş and Yurtlu, 2019). Guest comments and opinions significantly affect the purchasing intentions of potential tourists (Sezgin and Yurtlu, 2021). Therefore, guests who benefit from the services of the hotels share their experiences and opinions on online platforms and market the service quality they receive online. Thanks to this software, hotel management can present online guest opinions to their visitors on corporate websites. The function of the rate scanner software for the competitor hotels is to analyze the prices of the competitor hotels in the online distribution channels and thus assist the hotel management in their pricing decisions. In other words, this software tool is an effective service that is active in the online distribution channels of hotels.

Limitation of the Research. Keywords in Turkish and English languages (Online Hotel Channel Manager, Hotel Channel Management, Cloud PMS, Web PMS, Cloud/Web Hotel Management System, Reservation Module, Reservation Engine, Hotel Reputation Manager, Hotel Comment Tracker, Rate Scanner for Competitor Hotels, and Hotel Price Tracker) were entered, and the websites of the companies included in the results were examined. The data obtained in the research are limited to the websites of the relevant companies that have offices in Turkey and the information on these sites, which constitutes the limitation of the research.

Validity and Reliability of the Research. In order to ensure validity in qualitative research, researchers should personally take part in the data collection phase. In the process of analyzing the research data, it should be confirmed that comprehensive information is presented and discussions are made among the researchers on the creation of the research model. Besides, the analysis should be carried out with at least two researchers, and the data should be presented directly by sticking to its nature (Yıldırım and Şimşek, 2011). The "researcher triangulation" technique was applied for reliability in the research. This technique is defined as analyzing and comparing the qualitative data obtained in the study, independently of each other, accompanied by two or more researchers (Patton, 2014).

The data obtained within the scope of the research were analyzed in detail by the researchers. At this stage, the information obtained from the literature and the websites of the enterprises was compared. Discussions were made between the authors in case of inconsistencies, and a consensus was reached. In light of the information collected, the operating model of the software for the digital distribution channels offered in the sector for the direct marketing of the hotels was converted into a diagram (Figure 1). This emerging model was then presented to three different experts who are managers in digital marketing in tourism for their opinions. As a result of expert opinions, necessary corrections were made regarding the relevant operating model, and the model was finalized. In the analysis of the research process data, discussions were carried out between the researchers at each stage, a consensus was formed, and expert opinions were taken. Thus, the validity and reliability of the study were ensured.

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Results

As a result of the research, 57 businesses that provide digital distribution software services in Turkey for direct marketing of hotels were reached. The alphabetical order of these enterprises and the service tools they offer are presented in Table 1. Companies providing related services are shown with a "+" sign in Table 1. Those which do not have the relevant software services on the website are left blank.

Table 1. Businesses Providing Software Services for Digital Distribution Channels in Direct Marketing of Hotels

Companies	Channel Manager	Cloud PMS	Booking Engine	Reputation Manager	Competitors Rate Scanner
1	2	3	4	5	6
Adonisotel.com	+	+	+		
Adviceal/Minirez	+		+		
AmonRa/Hotech	+	+	+	+*	
Art-In Review				+	
AsyaSoft	+		+	+*	
Barboon.net	+		+		
BookLogic	+		+	+	+
Bookup			+		
ButikSoft	+	+	+		
ChannelRez	+		+		
Diffea			+		
ElektraWeb	+	+	+	+*	+
ErbaSoft		+	+		
E-tour.org			+	+*	
EuroProtel		+			
Flexxi.net		+			
HMS Otel	+	+	+	+*	+
Hotel360	+		+		
HotelAdvisor.net	+		+		
HotelAssistant.com					+
HotelDanismanligi.com	+		+		
Hotelier101/Basitotel	+	+	+		
HotelInterval	+		+	+**	+
HotelLinkage	+	+	+		+
HotelPartner	+		+	+**	+
HotelRunner/RateFor	+	+	+	+*	+
HotelSilverLight	+	+	+		
HotelSmart		+	+		
HotelUpLift				+	
Ibem.com		+	+		
Inngenius	+	+	+		
Klonbits	+		+		
Kobimedya.com	+				
Mava		+	+		
Medyanova.com			+	+*	
Mioplus			+		
Octopus PMS	+	+	+		
Onlinekanalyonetimi.com	+		+		
OtelCall			+		
OtelCRM.net				+*	
OtelExpert	+		+		
Otelrekabet.com				+	+***
Phobstr	+		+		

<div align="right">*Table 1.* continued</div>

1	2	3	4	5	6
Protel	+	+	+	+*	
ResClick	+		+		
Reseliva	+		+		
Rezervation.gezinomi.com			+		
SabeeApp	+	+	+	+*	
Sedna Cloud		+		+*	
Simprasuite	+	+	+		
Sispar			+	+*	
Sistem Otel	+	+	+	+*	
Surrealist.com			+		
Travelaps	+		+		
Webee				+*	
Webius Digital			+	+**	
WireOtech				+*	
Total n: 57	**33**	**22**	**46**	**22**	**9**

*: In-house reputation manager software only. **: Internal and external reputation manager software ***: B2B (Business to Business) prices included

Among the businesses in Table 1, it was determined that 46 enterprises (80.7%) mostly offered reservation module software. Besides, 33 enterprises (57.9%) provide channel manager software. The number of businesses that provide cloud PMS and online reputation manager software among the identified firms is 22 (38.6%). It was concluded that 9 companies (15.8%) offer rate scanner software services for competing hotels. Additionally, one of these businesses can offer specific B2B prices to hotels in addition to B2C (Business to Consumer) prices. It was also determined that 3 of the companies that provide reputation manager software services could report the guest opinions both in-house and online channels together, while 4 companies can only report the feedback from the guests to the hotels as semantic analyzes by scanning the comments and opinions on the online channels of the hotels. Moreover, it was found out that the remaining 15 businesses provide software services that collect and analyze only in-house guest opinions from the reservation stage to the end of the holiday period.

As a result of the content analysis on the websites of the enterprises for the relevant software services, the number of enterprises that provide all five software services determined in the research to hotels is 3 (5%), the number of enterprises providing four software services is 8 (14%), the number of enterprises providing three software services is 8 (14%), the number of businesses providing two software services is 23 (40%), and the number of businesses providing one software service is 15 (26%). Besides, it was indicated that 15 firms that provide cloud PMS service offer reservation modules and channel manager software to hotels in an integrated manner with cloud PMS software. It was determined that 4 companies that provide cloud PMS provide reservation module services integrated with cloud PMS. It was concluded that 3 companies only provide cloud PMS service. Also, all the 32 companies, except 1 company, provide reservation module service among the companies that offer channel manager software services.

Considering the information obtained within the scope of the study, the operating model of the software developed for digital distribution channels in the direct marketing of hotels is presented in Figure 1. The operation chart of the software examined in Fig. 1 was created as a result of the information obtained from the websites of the companies determined within the scope of the research. While creating the schema, besides the written information on the enterprises' websites, the visual schemas they presented were also examined. The operational chart created with the data obtained from the written information and visual diagrams on the websites of the enterprises was then presented to three separate experts who are experts in their fields, and their opinions were collected.
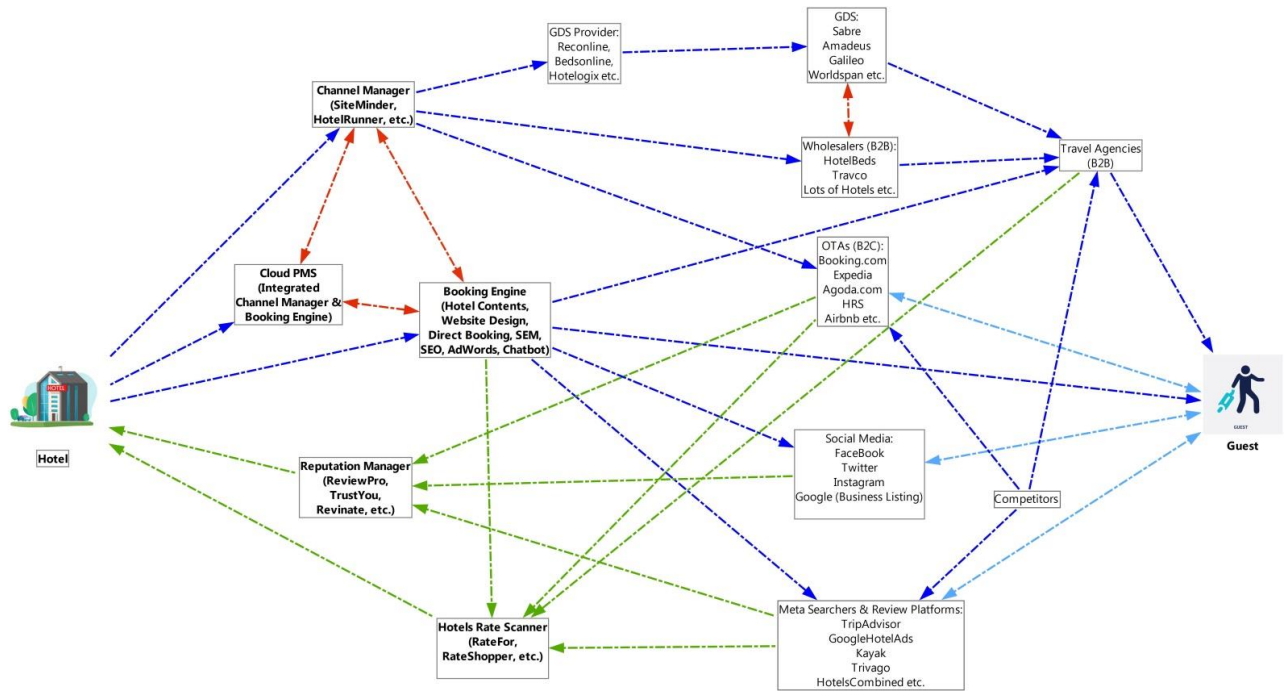
Fig. 1. *Functioning of Digital Distribution Channels Software in Direct Marketing of Hotels*

As a result of the interviews, the final version of the schema was obtained by rearranging. Accordingly, on the diagram in Figure 1, information about each software tool in the digital distribution channels of the hotels is presented below, with quotations from the websites of the sample businesses.

Considering the operation of the online reservation module, the summary information on the website of "Reseliva" and "HotelPartner" businesses is given below:

• *"Reseliva booking engine empowers your hotel's website and allows your guests to book directly from your website. You can also sell your rooms on your hotel's Facebook page or mobile website at no extra cost, and you can get online reservations from your TripAdvisor page. Thanks to Reseliva, you pay less commission to reservation sites and agencies by taking your online reservations through your channels, and direct reservations increase your income. Besides, many features such as extra service sales and package sales allow you to earn extra income. Your guests can view your hotel's information in their language and make a reservation. You can create special prices, discounts, and capacity definitions for agencies and institutions on the reservation page for B2B sales. At the same time, Reseliva can integrate with hotel management systems (PMS)." (Reseliva, 2022).*

• *"With the booking module Mads, we easily connect hotels to major metasearch platforms to increase direct bookings. This software connects hotels to Google, TripAdvisor, Trivago, and similar search engines, allowing you to reach millions of target users every month. Offering unique core features, Hotel Partner Mads connects hotels and allows advertising as well as optimizing campaigns, increasing revenues, and obtaining new direct bookings." (HotelPartner, 2022).*

Reseliva states that using their reservation module, it is possible to make direct reservations from the website, including mobile platforms, TripAdvisor, and the hotel's Facebook page. The company also reports that users can achieve an increase in revenues due to the rise in direct reservations and the decrease in commissions paid to intermediaries, and also that sales revenues can be increased with extra service sales. Besides, in addition to integration with hotel management systems, special prices, discounts, and capacity can be defined for agencies and institutions for B2B sales. HotelPartner, on the other hand, suggests that in addition to connecting hotels to Google,

TripAdvisor, Trivago, and similar search engines through reservation modules they call Mads, campaign definitions can increase revenues by increasing direct bookings.

Considering the operation of the channel manager software, the summary information on the website of the "HotelRunner" and "HotelLinkage" businesses is given below:

- *"You can feed all channels simultaneously by managing your sales channels with HotelRunner's channel manager. HotelRunner gives you access to many new online sales channels. Thus, you can strengthen your online presence, increase your occupancy rates without the risk of double booking, and easily reach all your potential customers around the world. Avoid risks and ensure price parity with the centralized inventory." (HotelRunner, 2022).*

- *"Channel Manager is a software that allows you to manage many channels such as Booking.com, Expedia, Trivago, and Hotelbeds through a single platform. Instead of managing all these channels one by one, you can update your prices and availability with just one click using Channel Manager. Hotel Linkage Channel Manager is a high-speed and precise distribution system. It syncs data between hundreds of OTAs, GDSs, and your own website for ease of use." (HotelLinkage, 2022).*

Regarding the channel manager, HotelRunner expresses that online sales channels can be managed simultaneously, the risk of double reservations for online reservations can be avoided with the central inventory system, and an equal price balance can be achieved in online sales channels. HotelLinkage similarly defines channel manager software as a tool that enables various online channels such as Booking.com, Expedia, Trivago, and HotelBeds to be managed from a single platform, and underlines that the prices and availability in these distribution channels can be made quickly and precisely in a single transaction. The company also asserts that ease of use is created by synchronizing data between hundreds of online travel agencies (OTA) and global distribution systems (GDS), including the hotel website.

Considering the operation of the Cloud (Web) PMS software, the summary information on the website of the "ElektraWEB" enterprise is below:

- *"ElektraWEB is a high-tech software that enables end-to-end digital management of businesses from all areas, especially tourism, entertainment, and health sectors, with its web-based cloud structure. Thanks to the cloud structure, which provides much safer, faster, and most importantly economical management with the advantages of the cloud structure, it enables businesses of all sizes to start working today. The ElektraWEB Hotel Software is a web-based cloud hotel software where all administrative, financial, and operational processes of hospitality businesses can be managed. It has channel management and an online reservation engine." (ElektraWEB, 2022).*

ElektraWEB states that cloud PMS software can perform administrative, financial, and operational management functions businesses need in various fields such as tourism, entertainment, and health sectors, with a web-based cloud structure. Additionally, businesses can easily use the software with the safe, fast, and economical solutions it provides. It is emphasized that the channel management and online reservation module are integrated into the software.

Considering the operation of the Online Reputation Manager software, the summary information on the website of the "BookLogic" and "WebiusDigital" businesses are explained below:

- *"Hotel reputation manager software and review management system Brand Manager is an effective and independent reputation manager software that tracks online reviews, feedback, and other media about your hotel. The software also performs semantic analysis of your guests' reviews and comments. It allows you to increase your hotel's reputation, support your brand, manage your social media channels, and protect your hotel's corporate identity. Thanks to BookLogic, you can start improving your corporate image and managing social media channels." (BookLogic, 2022).*

- *"We are the Turkey representative of ReviewPro. Get analytics, benchmarks, reports with Reviewpro. It also allows hotel managers to centrally monitor reviews about their hotels posted on the world's leading hotel review sites and online travel agencies. Thus, hotels can easily manage their online reputation. ReviewPro helps you manage your organization more effectively by providing analytics, guest information system, competitive comparisons, and special reports."* (WebiusDigital, 2022).

BookLogic company declares that thanks to the reputation and comment management system software they call Brand Manager, users can independently monitor online reviews and feedback about hotels and analyze the data obtained from these channels. They add that they can also increase the hotels' reputation by protecting their corporate identity, supporting the brand, and managing social media channels. WebiusDigital, on the other hand, confirms that they are the Turkey representative of the international ReiewPro firm on reputation management software. It is stated that thanks to the software, hotel managers can centrally follow the reviews and comments on the world's leading sites about their hotels. In addition, the software provides particular analysis, reports, guest information, and competitive comparisons.

In addition to software that allows the analysis of comments and opinions on experience sharing platforms and social media channels on reputation management, it was also suggested that software that allows the analysis of in-house guest opinions has been developed in the research. The summary information on the website of the "SabeeApp" business on this subject is as follows:

- *"Even with the utmost effort and attention, things can sometimes go wrong. Get notified now to eliminate the problem and improve the guest experience and save time. Upon arrival, guests will receive an automated notification requesting feedback on the check-in process, staff, and housekeeping via the GuestAdvisor app. In case of negative feedback, your staff can immediately step in to correct the error and resolve the issue. Thus, your guests will have a good experience during their stay."* (SabeeApp, 2022).

SabeeApp company focused on the reputation management issue in a structure that includes the entire holiday process, starting from the arrival of the guests to the facility. Thanks to the GuestAdvisor software they have put into service, hotel management can send various automatic notifications to the guests, including the entrance to the facility, room cleaning, and personnel, and receive their opinions. Thus, the software aims to establish a dynamic communication network with the guests, react immediately to possible negative feedback, and as a result, provide a comfortable accommodation experience for the guests.

When considering the operation of the Rate Scanner for Competitor Hotels software, the summary information on the website of the "RateFor" and "HMS Hotel" businesses is given below:

- *"RateFor is a system that compares the prices shown to the end-user in the 18 most popular online sales channels for facilities and agencies and reports instantly on a single screen based on the number of people and date range. With RateFor, you can optimize your prices by reporting the prices of competitor facilities in your region on online channels. With RateFor, you can continuously see on a single page on which online platform and at what price the rooms of your facility are sold, and you can achieve price equality."* (RateFor, 2022).

- *"Thanks to HMS Rate, you can instantly check the prices of competing hotels on popular sales channels. Thus, you could determine the price by checking your rival hotels. You can easily do all these operations on a single screen. HMS Rate system is getting richer by adding new sales channels every day."* (HMS Hotel, 2022).

The RateFor company states that thanks to its software, hotel managers can report the prices for which the facilities are advertised in 18 popular online travel agencies, in various reservation types such as the requested date and number of people. Thus, they can compare the prices of competing facilities and the hotel itself and also avoid different possible pricing of the facility in the relevant online travel agencies. On the other hand, HMS Hotel expressed that thanks to the software

titled HMS Rate, the hotel prices in popular sales channels are reported instantly, and the facilities have the opportunity to determine their prices accordingly. Although the firm does not specify how many sales channels can report prices on its website, it indicates that the number of these channels is increasing day by day.

Conclusions and Discussion

In this research conducted to determine the operation and interaction of the software developed for digital distribution channels in the direct marketing of hotels, 57 enterprises providing the relevant software service in Turkey were reached, and content reviews were conducted on the websites of these enterprises within the scope of the research objective. It is thought that the research is essential in terms of revealing the functioning of the related software products, as well as revealing the services of the companies that offer these software services in Turkey and the distribution of the services provided.

The software produced by software companies for the direct digital marketing of hotels is increasing and developing day by day. The recognition and adoption of the technologies developed in this context by hotel management take time (Yurtlu and Saçlı, 2021). It was found out that some software companies (such as HotelRunner, HotelLinkage, AdviceAl) that were examined in the research created their pages and blog sites with the title of "academy" on their websites. On these pages, they reported that businesses offer training materials to use the software they provide and the benefits they create. This situation can be explained by the fact that academic training in universities on new software technologies developed for the operational activities of business administrations in the tourism industry is still insufficient. In this context, it is vital to include topics related to the operation of the relevant software among the course topics in the relevant departments of universities in tourism education in spreading awareness about the advantages of software technologies developed in tourism.

Given the content analyses made on the websites of the software companies, it was concluded that the software products used in the digital distribution channels in the direct marketing of the hotels have a versatile and dynamic structure, as shown in Figure 1. The analysis of the software provided to the hotels by the software companies within the scope of the research proposes that the software offered has similar functions around common purposes according to the type of service. However, each business names such software under different brands and offers them to the hotels. In this context, it is recommended to conduct studies to reveal the extent to which solutions can be offered to the needs of the facilities by interviewing the hotel management using the relevant software.

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