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Digital Business Strategies for Incumbent Firms. How a Scandinavian hotel chain competes with the internet giants

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Digital Business Strategies for Incumbent Firms

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Abstract. The rise of digital platform companies has shaken many business sectors and led to the emergence of new competition arenas, digital business ecosystems. Incumbent firms realize they need to change how they do business, and that conventional business strategies are no longer fit for competing in these new digital arenas. Our research questions are (i) how can incumbent service firms develop and leverage a digital business strategy, and (ii) how can hotels and hotel chains compete with online travel agencies (OTAs) in digital hospitality ecosystems? We chose a longitudinal case study to explore how a large Scandinavian hotel chain implemented a digital business strategy to compete with OTAs in a digital hospitality ecosystem. Our approach was to stay close to the practices and actual behaviours of the company and the individuals engaged in fulfilling the strategy. We contribute to theory and practice by proposing that (i) incumbent firms need two strategies, one for the digital ecosystem and one for the traditional competition arena, (ii) that the two strategies should be implemented ambidextrously but also integrated and (iii) that to succeed, it is essential to establish self-reinforcing interactions between the digital and the physical.

Key words: Digital business strategy, hospitality sector, online travel agencies

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1 Introduction

The rise of digital platform companies has shaken many business sectors and led to the emergence of new competition arenas (Parker et al. 2016a). What characterizes these arenas is that internet-based platform companies tend to outcompete established and incumbent firms; well-known examples are how Amazon outcompetes bookstores and Uber outcompetes local taxi companies. The main reason is assumed to be the power of network effects in two-sided markets (Rochet and Tirole 2003), which leads to the winner takes all.

How can incumbent firms fight back? The answer is assumed to be a digital business strategy, that is, a fusion between IT strategies and business (Bharadwaj et al. 2013). However, it is well-documented that digital strategy in incumbent firms is different and more challenging than in born-digital firms, such as Google and Netflix. While born-digital firms can exploit network effects for rapid growth (Parker et al. 2016b), incumbent firms evolve slower, and have to combine digital and physical elements when digitalizing (Svahn et al. 2017). A particular challenge emerges when incumbent firms meet platform companies in direct competition in the whole or parts of the value chain. One prominent example is the rise of new platform-based companies in service sectors, such as transport (Uber, Lyft), accommodation (Booking.com, Expedia, Airbnb) and package and food delivery (Deliv, Foodora). A study of the competition in the sharing economy revealed five different strategic responses for incumbent firms (Zhang et al. 2018), as shown in Table 1.

Strategic response	*Description*
1. Strengthen business as usual	Leverage existing resources to meet the competition
2. Invest, learn, act	Invest in a disruptive firm to learn and experiment
3. Step-out and partner	Partner with a successful platform company
4. Hybrid	Incorporate parts of the new ecosystem into the firm
5. Expand and compete	If the existing business model is suited, expand it

Table 1. Strategic options for incumbent firms

For incumbent firms, these are difficult choices, because the competition arena in digital ecosystems is a moving target, as new entrants and technologies emerge continuously (Sia et al. 2016). And while new competitors may appear at any time, it takes time and resources to craft a digital business strategy, and to establish the needed technologies and competence.

How can these firms develop and implement a digital business strategy? Our research is motivated by the observation that there is a growing body of theory on digital business strategy, but relatively few empirical studies on incumbent firms (Holotiuk and Beimborn 2017). We therefore propose that in-depth case studies of large-scale initiatives will contribute to theory development and to practice.

This paper investigates the strategies of hotel chains in the competitive arena of the hospitality industry, where online travel agencies (OTAs) such as Hotels.com and Booking.com, based on their digital platforms, have industrialized a worldwide digital hospitality ecosystem. Seen from the individual traveller's perspective, these agencies provide convenient hotel booking typically by listing the available hotel rooms at a destination and sorting them according to various criteria. This allows for easy price and offerings comparison. These conveniences have led to millions of travellers using OTAs every day.

For hotels and hotel chains, OTAs come as a more mixed blessing. On the one hand, they offer an efficient distribution channel, making travel services available on the internet. On the other hand, managers realize that new actors are changing the rules of competition and thus threatening the industry's whole business model. First, internet mediators take a large cut of the price for their service; OTAs are reported to charge 15-30% of the room price. Second, by dealing directly with customers, OTAs also accumulate the information needed to manage customer relationships. As expressed by a top hotel manager we interviewed:

We run the risk of becoming a commodity provider of hotel rooms, auctioning out our free rooms to Hotels.com and the other OTAs who will make all the profits, while we will be left to compete on price only.

Research highlights the importance of developing a digital business strategy to compete in the dynamic and emerging digital landscape (Bharadwaj et al. 2013). We conceptualize this landscape as a digital ecosystem (Parker et al. 2016b). There is, however, still a need for a better theoretical and empirical understanding of the conditions under which incumbent service firms can capture more economic value through such strategies in the digital ecosystem (Raguseo et al. 2017). Therefore, our first research question is:

How can incumbent service firms develop and leverage a digital business strategy?

From a more practical perspective, what are the options for hotel chains in achieving a more symmetrical relationship with OTAs? We chose to investigate how a regional hotel chain, Nordic Choice, developed a digital business strategy to compete with OTAs. As such, our second research question is:

How can hotels and hotel chains compete with OTAs in digital hospitality ecosystems?

We aim to respond to the call from Pettigrew (2011) for "scholarship with impact". This study's research approach was to stay close to the practices and actual behaviours of the company and the individuals engaged in fulfilling the strategy. We proceed as follows: after reviewing the relevant research, we present the case and research method. Then, we offer and analyse the empirical findings and assess the short-term results of the hotel chain's digital strategy. We contribute to the literature by giving empirical evidence on how firms build and enact a digital business strategy to manoeuvre in a digital business ecosystem and practice with three effective options that managers may consider. The paper highlights some key elements that practitioners in the hospitality sector may consider when implementing an effective digital strategy.

2 Literature

We first review the literature on digital business strategy and digital business ecosystems, as well as describe the competitive digital arena for this study, the digital hospitality ecosystem.

2.1 Digital business strategy

Bharadwaj et al. (2013) presented some influential ideas on digital business strategy. Their key point is that firms are no longer served by an IT strategy (as one of several sub-strategies), but rather a digital business strategy, defined as an organizational strategy formulated and executed by leveraging digital resources to create differential value. As such, a digital business strategy should not, as IS/IT strategy does, exist as a functional-level strategy under the organization's general business strategy, but rather as a fusion of the two (Mithas et al. 2013). As organizations become increasingly dependent on digital technology to run their businesses, Bharadwaj et al. (2013) argued that digital business strategy will in fact become or replace general business strategy: "it is not about changing the way we do technology, but changing the way we do business by rethinking strategy" (Westerman et al. 2011).

Digital business strategy is described as different from IT strategy in four aspects: scope (it transcends traditional functional and process silos in the organization), scale (it involves a rapid up and down scaling of digital resources), speed (of product launches and decision-making) and source of value creation (the increased value of information and multisided business models).

In a study on Volvo Cars, Svahn et al. (2017) found that incumbent firms face four competing concerns: capability (existing versus requisite), focus (product versus process), collaboration (internal versus external) and governance (control versus flexibility). This implies that incumbent firms must combine their established capabilities with new digital innovations. In this same line, Chanias et al. (2019) investigated a financial institution and suggested a process model for pre-digital organizations in traditional industries. The model builds on the strategizing literature and focuses on a continuous series of digital strategy making episodes. This makes digital strategy a moving target, continuously in the making, with no foreseeable end.

Based on a study from the bank sector, Sia et al. (2016), theorized four key digital business strategy capabilities:

- A digital business strategy demands strong leadership
- An agile and scalable core is critical
- A digital business strategy exploits information abundance to create new value for customers
- A digital business strategy requires the continuous navigation of the dynamic and emerging digital landscape

The need for strong leadership highlights that a digital business strategy cannot be the responsibility of the IT department; rather, it is the responsibility of top management, because it impinges on all parts of the organization. Top management has a key role in creating a digital mindset, a prerequisite for fusing business and technology strategies. Some organizations have chosen to assign a top manager, a Chief Digital Officer (CDO), to front the digital business strategy (Tumbas et al. 2017), and set up a new, digitally competent organization responsible for realizing it (Sia et al. 2016). This is congruent with the idea of the *ambidextrous* organization (O'Reilly and Tushman 2004), or an organization that separates its new, exploratory units from its traditional, exploitative ones, allowing them to have different processes, structures and cultures. Ambidexterity is not a straightforward approach, however; it requires a delicate balance

between the two units, as they should be loosely coupled, but co-ordinated at the senior executive level (Luger et al. 2018; O'Reilly and Tushman 2008).

The agile and scalable core has to do with the architecture of the IT solutions. In an IT architecture context, the core is the central transaction register and the middleware that enables non-core services (e.g., user interfaces, mobile apps and partner services) to interact with key data resources. In its purest form, the core is a platform interacting with app peripherals (Tiwana 2014), such as with Uber and Airbnb. In practice, IT infrastructures are more complex and include a large number of interlinked systems. Firms should strive for infrastructures that are modular and scalable, swiftly supporting and deploying new business initiatives. Strong competence is needed, especially on technology integration. With the development of digital business ecosystems that transcend organizational borders, defining and establishing a new core is becoming more difficult, but without a defined core it is difficult to implement a digital business strategy (Sia et al. 2016).

To exploit information abundance to create new value for customers is another key point. The most salient example is Google, which has used the information generated by individuals' searches to establish a global advertising platform, based on continuous surveillance (Zuboff 2018). Platform literature (Parker et al. 2016b) draws upon theories of two- or multisided markets to describe and analyse self-reinforcing processes, where the availability of apps attract more users to a platform that again attracts more developers to develop, which in turn attracts more app developers. The platform provides the information resources that enable this interaction.

Finally, a digital business strategy requires the continuous navigation of the dynamic and emerging digital landscape. Based on their unique strengths and resources, firms should constantly search for new sources of value and position themselves towards competitors and potential disruptors. Technology scanning and experimentation is therefore necessary. Competing on these terms requires an understanding of the space being competed in (Weill and Woerner 2015). This article proposes to conceptualize this space as a digital business ecosystem.

2.2 Digital business ecosystems

In the management literature, the boundaries of strategy initiatives are increasingly enlarged, from resources, towards business models, to business ecosystems (Priem et al. 2013). According to Nischak et al. (2017, p.13), a digital business ecosystem is a flexible combination of heterogeneous actors "interacting co-optitively by fundamentally drawing on a shared set of digital resources in conjunction with non-digital resources

driven by the underlying perception that engaging in joint value creation increases individual chances of survival and growth".

In the business ecosystem perspective, a firm's success depends on various distributed actors (Iansiti and Levien 2004), and the fit to infrastructures or complements provided by others (Moore 1993). Moreover, a firm affects and is affected not only by actors in its core industry, but also by actors in other sectors. Every firm should be seen as part of a business ecosystem (Moore 1993), consisting of heterogeneous actors such as suppliers, partners, customers and competitors, as well as their interrelationships (Iansiti and Levien 2004).

The metaphor of digital business ecosystems was the mutual discovery between the technical and the economic spheres of research in the beginning of the 2000s (Parker et al. 2016b). A digital business ecosystem can be regarded as an open, adaptive, socio-technical system characterized by self-organization and sustainability (Briscoe and DeWilde 2006); expressed more simply, a digital business ecosystem is a network of people and organizations connected by digital technology, often with a core called a platform.

Well-known examples of digital business ecosystems are social media (Facebook, Twitter), mobile networks (Apple, Samsung), supermarkets (Amazon) and financial networks such as banks and stock exchanges. Digital business ecosystems do not grow through centralized planning, but through network effects (Parker et al. 2016b) and socio-technical mechanisms, such as innovation, adoption and scaling (Henfridsson and Bygstad 2013). In 2019, half of the world's ten largest companies (in stock value) were centres of digital business ecosystems (Global Finance, glfmag.com), and billions of people are daily users and customers of these systems.

Nischak et al. (2017) found three components to be essential elements of digital business ecosystems, namely value exchange (innovation, information and products/services), resources (digital and non-digital) and actors (organizations, individuals, societies). These can easily be adapted and specialized to the digital ecosystem in the hospitality domain (see Figure 1).

In digital hospitality ecosystems, bookings, information and hotel rooms/services are the basis for value exchange. The resources are mainly platforms, websites and apps, in addition to non-digital resources. The main actors are the hotels, OTAs, meta-sites, Google and individual customers.

For hotels and hotel chains specifically, being part of a digital hospitality ecosystem implies:

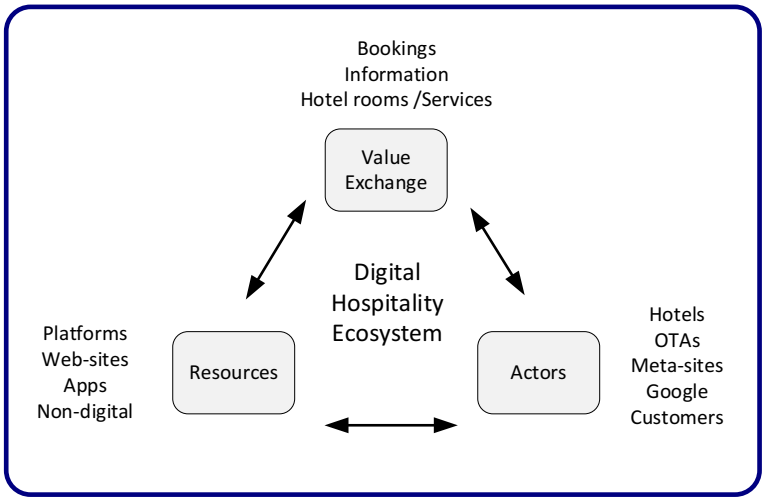

Figure 1. Digital hospitality ecosystem (based on Nischak et al. 2017).

- The arena is the internet and marketing and sales are conducted through a sophisticated set of mechanisms, such as Google searches, social media advertising, recommendation systems, programmatic advertisement and e-mail marketing.

- The hospitality ecosystem is not centrally governed, but its technical architecture allows platform owners to control access through boundary resources and to harvest income from the ecosystem through various transaction fees.

- The hospitality ecosystem consists of several connected sub-ecosystems, such as Google, Booking.com and Hotels.com, as well as the ecosystems of various hotels and hotel chains.

To illustrate these points, a simplified illustration of the paths in the digital hospitality ecosystem is offered in Figure 2.

Four booking paths exist in Figure 2:

- Path (i) is a direct booking, where the hotel customer accesses and books through the hotel's website (or app). In this case, the hotel receives the full booking income.

- The other paths start with a web search via Google[1]. Google auctions the hotel customer's profile and presents hits according to the bids it receives. OTAs are

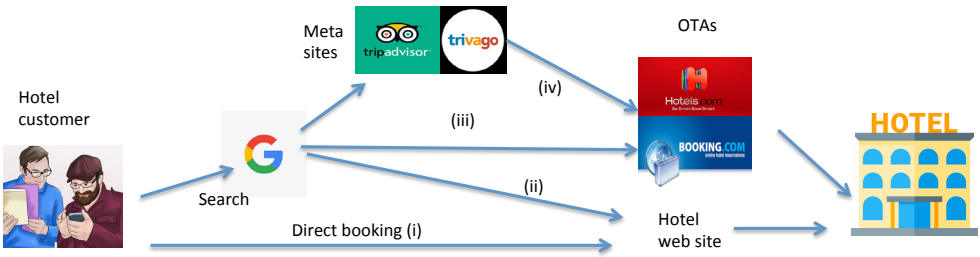

Figure 2. Paths through the digital hospitality ecosystem.

among Google's largest customers and usually appear on top of the Google hit list. From there:

- Path (ii) is a direct booking on the hotel website from Google. The hotel receives the booking income, but often pays a fee to Google for appearing high up on the list.

- Path (iii) goes from Google to an OTA, where the room is booked based on the OTA's access to the hotel's room inventory. Google charges the OTA for this service. OTAs, on their end, typically charge the hotel a percentage of the room price, depending on contracts.

- Path (iv) goes from Google to a meta-site that compares prices from different OTAs. The customer chooses one OTA and do the actual booking from there. The OTA is charged by the meta-site, which likewise is charged by Google. The price paid by the customer is more or less the same, regardless of booking path.

Using terms from Bharadwaj et al. (2013), the competition of the digital hospitality ecosystem can be described in this way:

Scope. The digital arena is global, which means that local and regional knowledge may play a less significant role than in traditional markets. As Hirt and Willmott (2014) showed, the transparency of prices and services puts increased pressure on pricing.
Scale. Network effects within multisided platforms create rapid scale potential. In addition, the network effects of expanding digital platforms often lead to one or two dominating global actors (Parker et al. 2016a), and other players have to find a subordinate position.

Speed. One aspect is the general speed of change, as new competitors and channels arrive constantly. Another is the speed of network formation and adaptation. For instance, plug-and-play business models are available for new actors, allowing quick market restructuring (Hirt and Willmott 2014).

Source of value creation. Information itself has become a key resource in the hospitality sector, requiring specialized technical and commercial competence to leverage it. Controlling customer data is a key competitive factor (Bharadwaj et al. 2013).
Summing up, the digital hospitality ecosystem is continuously changing regarding actors, contract terms and traffic—and the marketing departments in incumbent hotels and hotel chains are often poorly equipped to deal with this environment, both in terms of resources and personnel (Lee et al. 2013).

3 Method and case

To investigate our research questions, we selected an exploratory case study approach that provided us rich longitudinal data (George and Bennett 2005). For this, we studied a large hotel chain over a five-year period to capture how the company developed and implemented a digital business strategy to compete with the OTAs in the digital hospitality ecosystem. Qualitative, in-depth longitudinal case studies are well-suited to understanding how a phenomenon emerges and develops over time (Langley 1999; Van de Ven 2007), thus allowing for complex explanations (Welch and Paavilainen-Mäntymäki 2014). We adopted a longitudinal research strategy (Myers 1997) with the intention to develop a rich description and conceptual analysis of a unique case (Lee and Baskerville 2003).

3.1 Research setting

Our research setting is the development of a digital business strategy for a large Nordic hotel chain, and how this strategy was instrumental in competing in the digital hospitality ecosystem. We selected a large hotel chain for two reasons. First, the hospitality industry offers an opportunity to investigate digital business strategy in an incumbent firm in the service sector surrounded by a complex digital ecosystem. Second, in contrast to single hotels, a large hotel chain has the resources to establish an ambitious digital business strategy to compete with OTAs in the digital ecosystem. In searching for possible organizations, the hotel chain Nordic Choice was identified as an offensive player, which offered the opportunity to investigate digital transformation in detail.

Nordic Choice is a hotel chain based in Scandinavia. It features 193 hotels and 33,500 rooms and had a turnover of 1.384 billion euros in 2018. There are 17,000 employees across Norway, Sweden, Denmark, Finland and the Baltics. The chain includes three brands, Comfort (budget), Quality (conference) and Clarion (high-end), and is owned by Petter Stordalen. In 2014, in response to the increasing competition from OTAs and the fear of losing control of its distribution channels and customer relationships, Nordic Choice initiated a digital business strategy. Its vision was to create the "best ecosystem in the Nordic region for digital booking and guest travel experience". The mission was to secure Nordic Choice's position in the future distribution landscape. A new organization, eBerry, was established to realize this vision.

3.2 Data collection

This study was built on several data sources: in-depth qualitative interviews, archival data, observations, internet statistics and accounting data (Table 2).

The researchers participated in internal conferences where strategies, projects and accomplishments were presented, and made on-site visits to Nordic Choice hotels. The researchers also engaged in the chain's loyalty program to get first-hand experience with the services and digital solutions from the customer side. In addition, we collected information about the digital hospitality ecosystem, its players, services and digital solutions online, and regularly visited hospitality websites (e.g., Skift.com). We gathered data that covered Nordic Choice's digital strategy process between the years 2014 and 2019.

Our main data source were the qualitative interviews. In line with Ghauri (2004), our primary selection criteria for key informants aimed to secure access to individuals who were personally involved in the implementation of the digital business strategy. To gather a variety of involvements and viewpoints, we chose informants from different parts of the organization and with different roles, such as top managers, department managers, marketing officers, IT personnel, accountants, controllers and receptionists. Interviews were conducted in three phases. In the first phase (2016-2017), we conducted 15 interviews. The purpose was to understand the participants' perceptions of the challenges and pressures the firm was confronted with leading up to the digital business strategy, and the initial activities to implement this strategy. In the second phase (2017-2018), we conduced 9 interviews to understand the informants' perceptions and experiences of the digital business strategy, including the establishment of eBerry (the new digital unit), digital projects and the loyalty program. In the third phase (2019), we conducted 7 interviews, in combination with several informal discussions with key

Data source	*Data type*	*Use in analysis*
31 in-terviews	First-phase interviews (15)	Understand the participants' perceptions of the challenges and pressures the firm was confronted with that led to the digital business strategy and the initial activities to implement it.
	Second-phase interviews (9)	Understand the informants' perceptions and experiences of the strategy, including eBerry, key digital and non-digital activities and the loyalty program.
	Third-phase interviews (7)	Understand the results and outcome of the strategy, challenges, current activities and plans for the future.
Archival data	Digital business strategy, company presentations, IT architecture and technical documentation, business cases, customer surveys, internet statistics, digital channel distribution mixes, accounting data	Provide information about the digital business strategy and its implementation, digital services offered, digital architecture and strategy outcomes. Create a timeline of events to support and triangulate the interview data.
	Online articles (e.g., Skift.com), newspaper articles, magazines	Understand the digital hospitality ecosystem.
Observ-ations	Participation at internal conferences, engagement with the loyalty program and digital solutions, hotel visits, informal conversations with managers and employees	Provide insights into ongoing events that could be further probed for data collection and to support and triangulate the interview data.
	Meetings where we presented the study to Nordic Choice	Validate our interpretations and clarify uncertainties or misunderstandings.

Table 2. Overview of various sources of qualitative data and their use

players. This phase's purpose was to understand the results and outcomes of the digital business strategy, as well as challenges and plans for the future. The data collection was purposely conducted to span the period immediately prior to and in parallel with the implementation of Nordic Choice's digital business strategy to capture both the conditions that led to its development and the actual issues inherent to its implementation.

The interviews were semi-structured and open-ended to capture the informants' perceptions of the digital business strategy. We designed an interview guide to cover our topics of interest while allowing the exploration of new areas. The main topics discussed were the key challenges facing Nordic Choice in the digital hospitality ecosystem; strategic alternatives and choices; the selected technical and organizational solutions; and implementation challenges, outcomes and plans. In this manner, we tracked the unfolding of events both in real time and in retrospect, thus covering the five-year period. Two researchers participated in most of the interviews, which lasted 1-1.5 hours. Notes were taken during the interviews, and summaries were then made from those notes. The interviews were also audio-recorded and transcribed. If necessary, the interviews were complemented with e-mail correspondence to ask supplementary questions or clarify certain points.

We also collected firm-level data from company reports, presentations and internal documents for the period studied, as summarized in Table 2. In addition, we collected booking volumes over time, that is, number of OTA and internal bookings for both web and app channels. The archival documents were used to verify and cross-check the information obtained through the interviews, confirm the timeline's accuracy and follow up on key concerns and events mentioned during the interviews (Eriksson and Kovalainen 2008). In this manner, we triangulated our data sources, which contributes to this study's trustworthiness (Cuervo-Cazurra et al. 2016).

3.3 Data analysis

As shown in Table 3, the data analysis was conducted in three steps (Miles and Huberman 1994). First, we established the case chronology and constructed a timeline and a case description, including key events during the process. In the second step, building on digital business strategy concepts, we made a comprehensive analysis of the case, structured according to Sia et al.'s (2016) framework for digital business strategy. During this process, we reanalysed the interviews to understand how key actors perceived the challenges, and how various measures were justified. We also conducted a quantitative analysis of booking data to verify the impact of the digital strategy.

Activity	*Output*
1. Establish case chronology and a timeline with key events	Case description, timeline, key events (Figure 3)
2. Comprehensive analysis of the case based on Sia et al.'s (2016) framework	Structured case description based on the four digital capabilities (section 4)
3. Assess case to identify practical implications and propositions	Practical implications and theoretical propositions (section 5)

Table 3. Steps in the data analysis

In the third step, we assessed the insights gained from the empirical work, and developed the practical implications and theoretical propositions. To identify the practical implications, we compared our findings with insights from the digital business strategy literature (Bharadwaj et al. 2013) and digital business ecosystem research (Nischak et al. 2017), and empirical research on digital transformation (Sia et al. 2016).

4 Findings

While the theory on digital business strategy is relatively simple (Bharadwaj et al. 2013; Sia et al. 2016), implementing such a strategy in an incumbent firm is quite challenging (Svahn et al. 2017). In the case of Nordic Choice, the challenge is accentuated by the fact that its main competitors, the OTAs, are well-established digital platform companies, with 20 years' experience in digital competition and a dominating market position.

This section presents the key findings using the four capabilities framework from Sia et al. (2016). In doing so, how the hotel chain combines traditional and digital assets to

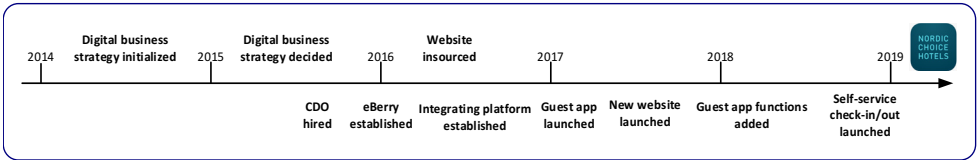

Figure 3. Case timeline with key events

increase its competitive strength is also discussed. An overview of the case's chronology is offered in Figure 3.

4.1 Strong leadership

For years, Nordic Choice had considered OTAs valuable partners that offer an effective marketing and distribution channel. In 2014, however, the management team realized that the increasing number of bookings through OTAs led to price pressures and lower margins. Moreover, by dealing directly with the customers, the OTAs accumulated the information Nordic Choice needed to manage customer relationships. As expressed by the company's vice president, Bjørn Arild Wisth:

> First, the online booking websites, such as Hotels.com and Booking.com, emerged. We then regarded them as helpful add-ons, making it easier to find us, but got worried when their share of the room price got greedy. Then other services emerged, such as TripAdvisor, placing themselves between the customer and the booking websites, also making money on our customers. Over time, an increasing share of our customers communicated with these sites, and not with us. I realized that if nothing were done, we would end up as a commodity provider of hotel rooms, leaving the distribution to the internet companies.

Management realized that they had to respond to this development. Therefore, a digital initiative was launched in 2015. The vision was to create "the best ecosystem in the Nordics for digital booking and guest travel experience". This aim was to secure the position of Nordic Choice in the future distribution landscape. Nordic Choice owner Stordalen heavily fronted the strategy, and it was backed by the whole management team. At a large in-house conference for the chain's employees that the researchers attended, Stordalen presented the digital vision and explained:

> The competition is extremely hard. We have to take part in the digital transformation and respond to our guests' changing needs and requirements. We are already investing heavily in digital technology and will continue to do so. No hotel chain will invest more in technology than us. One of our competitors said to me, "We have completed our technology investments." My response is: if you think you are finished, then you are indeed finished. My message is: we have just started.

The digital initiative consisted of three main parts: (i) a digital business strategy, (ii) the establishment of the eBerry company and (iii) a loyalty program. To implement the digital business strategy, it was decided to establish a new IT department, organized as the company eBerry; the existing in-house IT department was a traditional service provider without the capabilities needed for the new strategy.

In late 2015, a CDO was hired with a background from one of the OTAs, and the eBerry company was established in January 2016. eBerry's mandate was to maintain the primary share of Nordic Choice's bookings in the distribution chain. While corporate headquarters is in Oslo, the eBerry developers were mainly located in Stockholm. eBerry immediately started to implement the strategy in the short-term by entering the digital competition arena (negotiating with OTAs, search optimization, continuous surveillance of digital traffic, etc.) and the long-term by investing in new digital solutions. For this, eBerry established three separate development teams: a platform team, a website team and an app team. The development of the website, which had earlier been outsourced to an external provider, was consequently insourced. In total, eBerry had 40 IT developers and quickly developed a different business culture. Said the CDO for this study:

> We do not run projects; we aim to be a technology firm building products. We have three main products: the Nordic Choice website, the integration platform and the Nordic Choice app. We run the distribution for Nordic Choice, with a turnover of 5 billion NOK each year. We are responsible for the loyalty program, campaigns and bookings. We also have a "Future Business" unit developing new technologies and ideas, such as robots.

The first year was successful, improving search optimization, etc., and eBerry started on long-term platform building and website and app development.

4.2 An agile and scalable core

Moving from a relatively simple booking system into the digital hospitality ecosystem was challenging. Commented the CDO:

> Legacy systems are a big challenge, both the six-year-old web solution and the old booking systems. We need a flexible platform, which is difficult to create. In addition, recruiting top competence is challenging. The traditional hotel culture is not congruent with the young IT geeks we are recruiting.

The system architecture was dramatically changed. OTAs were given direct but controlled access to Nordic Choice's legacy systems, showing only parts of hotel room inventory and allowing them to reserve rooms. The new eBerry solutions were a new improved hotel website, the innovative Nordic Choice guest app, a customer relationship management system and the bonus system.

To connect the website and guest app, eBerry's platform team established a robust internal digital platform (Omni), connecting existing and new systems. The objective was to build a platform that provides the website and app with equal booking functionality. From a customer perspective, the choice of digital channel should be transparent. Accordingly, a robust and functional digital platform was considered imperative for competing in the digital hospitality ecosystem.

4.3 Exploiting information to create new value for customers

The eBerry team understood that it also had to compete with OTAs for customer information, as the relationship between OTAs and Nordic Choice concerning information abundance was deeply asymmetric, with OTAs at a great advantage. OTAs have access to vast amounts of information, such as customer preferences, reviews and actions. In addition, they have access to Google search history. They have also developed sophisticated software that traces the actions of each potential customer to place clickable offers in e-mails. eBerry had access to much less information. It had, of course, the details of

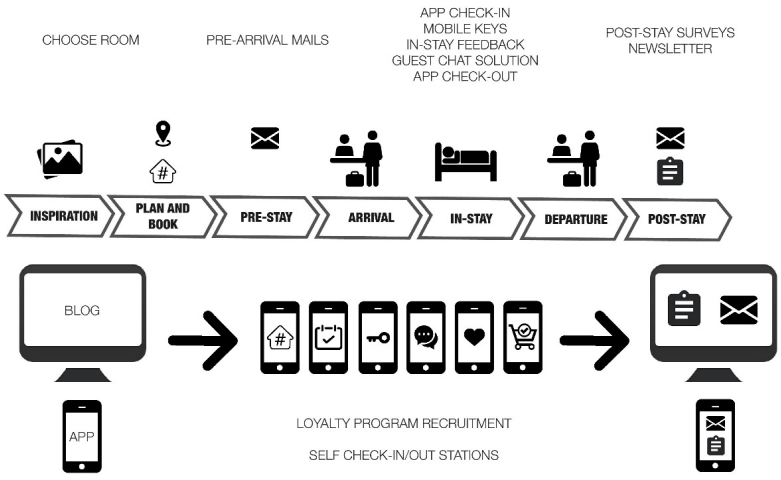

Figure 4. The digital guest journey

previous bookings and the profiles of established customers from the CRM system. In addition, by surveying activities on the Nordic Choice website, eBerry could analyse traffic and individual profiles, but with much less information than OTAs.

To mitigate this disadvantage, Nordic Choice instigated the second visit strategy: accepting that a relatively large share of first-time customers will book through OTAs. However, arriving customers would always, at check-in, be offered membership in the Nordic Choice loyalty program. The program included a relatively standard package of benefits, such as bonus points and extra services.

To support the second visit strategy, increase its online presence and collect information about customer behaviour, eBerry launched a customer app in 2017. At first the app supported standard hospitality functions, such as booking and check-in/check-out. To support an easy and convenient booking experience, it was decided not to require payment in advance. The app's functionality was aligned with the loyalty program's offerings and benefits. In 2018, new functions were included, such as mobile room keys, in-stay feedback, guest chat solutions, loyalty program functions and a personal history function. As part of eBerry's app initiative, self-service check-in/check-out stands were set up in hotel lobbies. The objective of the app-based solutions was to support guests' pre-stay, in-stay and post-stay, and implement the hotel chain's vision of a digital guest journey (see Figure 4).

In addition, the customer app provided eBerry valuable information about hotel guests' behaviours and preferences, and eBerry analysed daily how customers were using the hotel chain's website and app. The benefit for Nordic Choice was direct contact with customers (a weekly e-mail), which always reminded them that the easiest and cheapest way to book was through Nordic Choice's digital channels.

4.4 Continuous navigation in the digital landscape

The digital ecosystem of hotel booking is constantly changing. One manager commented:

> New issues arrive all the time and we need to adjust as we go. Five years ago, we were very naïve, and few in the industry understood the power of platforms. Now the OTAs have grown so big that we have to compete head-on, for instance, by conducting analytics at the level of the individual. We organize our marketing activities by distribution channels; some work with the OTAs, others with meta-sites and travel agencies. We negotiate distribution deals and renegotiate them when needed.

OTAs frequently change their business tactics as new services are launched and new actors arrive. The role of Google is important, as it is the gatekeeper to most traffic. Nordic Choice handles this at a strategic, tactical and operational level. At the strategic level, the top management group and the Nordic Choice board frequently assessed the OTAs' activities and services. Managers also followed the Skift website (industry) and participate in international forums. This allowed them to continuously consider and reconsider their strategic positioning in the digital hospitality ecosystem.

At the tactical level, managers focused on the communication channels directly with customers using e-mail marketing, the website and the app. A broad campaign in 2018 encouraged travellers to book with Nordic Choice directly. One important aspect was educating customers. For example, when a customer who booked through one of the OTAs wishes to register bonus points, the check-in staff will tell him/her that there are no bonus points earned if the booking was done through OTAs. One tactical challenge is perhaps banal, but very important: when people search on Google, they seldom go further than the first page. As anyone can check with a Google hotel search, OTAs consistently appear on top of the search, often in different views, and relegate the hotels themselves to the following pages. (OTAs are among Google's largest global customers and buy the hotels' brand names as search terms.) While this can be somewhat improved with search optimization, it is quite expensive to buy into a higher position. As such, during the three years of eBerry operations, the costs for Google rankings increased significantly.

On the operational level, one eBerry team specialized in surveying the web and booking traffic 24/7 to follow the competition arena in real time. This information was analysed daily and used systematically to improve performance.

Nordic Choice's digital business strategy has operated since January 2016, and the hotel chain plans to invest around 250 million NOK in digitalization in the next 3-4 years. eBerry has the full responsibility for the hotel chain's distribution and is allowed autonomy to compete in the digital hospitality ecosystem. The results have been satisfactory:

- The loyalty program has gained 2.2 million members, and the app has 254,000 downloads

- The revenue from booking through Nordic Choice's digital channels (website and app) was 210 million euros, representing a 78% increase in digital bookings since 2016

- The booking costs through Nordic Choice's digital channels are 3% of the price, compared to 15-25% using an OTA

- The ongoing competition in the digital ecosystem is handled by Nordic Choice's own expertise

This, however, is only a start. The high ambition of the eBerry initiative, expressed as "creating the best ecosystem in the Nordics for digital booking and guest travel experience", is a long-term goal. It includes much more than room bookings, but will nevertheless be hard to achieve without effective competition with OTAs.

5 Discussion

In line with this paper's primarily empirical purpose, we first discuss its practical implications. Then, we assess the theoretical implications, where we focus on the particular challenge for incumbent service firms to develop a digital business strategy.

5.1 Practical implications

In discussing this study's practical implications, there is a return to the research question, *how can hotels and hotel chains compete with OTAs in digital hospitality ecosystems?*

The OTA ecosystem has grown steadily over many years and remains highly profitable, meaning that OTAs possess superior financial and technological resources compared to hotels and hotel chains. Further, hotel chains have little tradition of cooperation and regard each other as primary competitors. In 2011, a Nordic initiative was taken to establish a joint service to compete with OTAs, but the Nordic hotel chains could not agree on a strategy. Another possibility might be to unite large hotel chains to generate more negotiating power against OTAs, but at the moment, no such initiatives are known.

The remaining strategic option seems to be chain-specific solutions that direct customers directly to a chain's own digital distribution channels rather than OTAs' (Toh et al. 2011). This study focused on the options for individual hotel chains. Does this strategy indicate that a hotel chain, such as Nordic Choice, can or should establish its own digital hospitality ecosystem, thereby terminating co-operation with OTAs? We believe, based on our study, that the answer is no. What this case showed is that it is possible for a medium-size hotel chain to compete effectively within, between and partly outside larger ecosystems. It highlighted that competing in a digital ecosystem is quite different from a rivalry in the traditional pipeline hospitality market, and that

this is particularly challenging for incumbent firms, which have to balance their traditional and digital strategies (Svahn et al. 2017). Considering the literature and our case evidence, there are three effective measures that practitioners in the hospitality industry may consider, as follows.

Establish Digital Competence. To be able to compete in the digital ecosystem, the hotel or hotel chain must establish specialized competence at the strategic, tactical and operative levels. Few hotels in the hospitality industry are technology-savvy. Although some services can be bought from consulting firms and specialized internet marketing wizards, the implementation of a digital business strategy is a core task for incumbent firms as well (Sia et al. 2016; Svahn et al. 2017). Moreover, many hotels will find it beneficial to employ a new executive at the top management level—a CDO—to make the digital transformation a strategic priority and orchestrate the various initiatives (Singh and Hess 2017). It is hard to overstate the importance of the role of the top management group in not only developing the strategy, but promoting and supporting its implementation.

Additionally, hotel chains should consider establishing a dedicated digital competence centre. Should the competence centre be established outside the incumbent firm as a separate business unit, such as the eBerry solution? The argument for this is mainly the need to develop a new business culture characterized by agility and digital innovation, recruiting employees from the digital community rather than from the industry. On the other hand, a new organization may lead to tensions with the mother company (Bygstad and Iden 2017). We return to this issue in section 5.2, where we discuss ambidexterity.

Take a Position in the Digital Landscape. The hotel chain must decide on its position in the digital hospitality ecosystem, and as the ecosystem is constantly evolving, this is a continuous task (Nischak et al. 2017). As Bharadwaj et al. (2013) argued, a digital business strategy must focus on scope (understanding and exploiting the new competition arena) and speed (being able to respond quickly to ongoing changes). Hotels must decide which combinations of services and capabilities should be part of the digital landscape that the hotel is competing in. Moreover, digital ecosystems are shared, open and blur organizational boundaries (Tiwana 2014). This implies, as in the case of the hospitality industry, that hotels must deal with OTAs as both partners and competitors and select the according arenas.

The key point here is that these relationships, in contrast to the long-term partnerships of the traditional hotel industry, are fluent and unstable. Therefore, IT solutions should be scalable, flexible and robust enough to deal with this changing landscape. An illustrating example is the eBerry IT solution, which shows how Nordic Choice's

own systems are connected to OTAs, but also how they restrict OTAs' access to their inventories.

Leverage the Interplay of Non-Digital and Digital Resources. A hotel chain can leverage its non-digital and digital resources more tactically (Nischak et al. 2017). This is in line with Bharadwaj et al.'s (2013) mention of finding new means of value capture. The best non-digital example from Nordic Choice's case is the second visit strategy, where the hotel guest at the check-in desk is recruited to the loyalty program. This is an occasion where the hotel has a real advantage over OTAs, since only the hotel meets the guest face-to-face. There are many other situations where the hotels could connect the guest much closer to the hotel.

The concept of the extended digital guest journey (as illustrated in Figure 4) is one such possibility. The loyalty guest app currently offers such services as room access, room service and fast check-in and check-out. These services have real benefits for the hotel guest and increase the value of the loyalty program, but there may be other possible services that make travel more comfortable for guests. The most attractive of these is probably combining digital and personal services, such as personal welcomes, where the reception staff know so much about the guest (both profile and travel purposes) that they can foresee that guest's needs.

5.2 Theoretical implications: how can incumbent service firms develop and leverage a digital business strategy?

In theorizing this study's findings, it is essential to understand the competitive arena we are investigating. It is characterized by what we could call a two-front war; hotel chains compete with each other in the physical realm of hotel services, while they compete with the OTAs in the digital ecosystem. Adding to this, the competition with OTAs is somewhat ambiguous, in the sense that OTAs are also booking partners in parts of the market.

This means that incumbent service firms must address the strategic issues carefully, looking both at the rivalry in the established (physical) arena, and at the competition on booking and customer relationships from the global ecosystems, and try to combine the responses into one coherent strategy. How can this be accomplished? Strategy research provides only partial answers to this question. The traditional literature, such as Porter's (1985) five forces theory, explains how to compete in the established arena, while the recent digital business strategy (Bharadwaj et al. 2013) and platform literature (Parker et al. 2016a) focuses on network effects as the driving force. They also argue that pipeline firms normally lose in competition with platform ecosystem firms.

Based on our findings, and the literature on digitalization in service firms (Zhang et al. 2018), we suggest that the key challenge for incumbent service firms is related to the need to integrate the digital and non-digital resources of the firm, and establish self-reinforcing interactions between the two. As our case showed, this takes place on several levels (see Table 4).

Managerial level	*Integrations*
Strategic	The strategy for the digital ecosystem should be integrated with the strategy for the traditional competition arena
Tactical	The digital resources for the digital ecosystem should be co-developed, ambidextrously, with the non-digital resources in the traditional competition arena
Operational	The provision/use of digital resources in the digital ecosystem requires ongoing interplay with the non-digital resources in the traditional competition arena

Table 4. Integrations on the three managerial levels

At a strategic level, these firms need to prepare for a two-front competition, that is, organizing and exploiting physical and digital resources accordingly (Svahn et al. 2017). This implies that incumbent firm needs two strategies, one addressing the traditional rivalry, and one addressing the digital ecosystem. This is incongruent with Bharadwaj et al.'s (2013, p.473) vision that the digital and business strategy should merge, however. Moreover, top managers need to figure out how to integrate these strategies in a way that reinforces the impact of both, meaning actions in the physical realm should trigger action in the digital, which again should enable more action in the physical realm.

At a tactical level, our case supports the idea that incumbent service firms should think and act ambidextrously, that is, separate the new initiative (responsible for the digital business strategy's implementation) from the mother organization, allowing it to have different processes, structures and cultures (O'Reilly and Tushman 2004). eBerry's establishment and development in our case vividly illustrates this point; the capacities of incumbent service firms (e.g., running hotels, taxi companies or parcel delivery) are quite different from the highly specialized skills and resources needed to compete in digital ecosystems. This agrees with Zhang et al.'s (2018) "invest, learn, act" strategy. However, our findings indicate that the ambidextrous action should be more integrated

than is recommended in the literature. This research (O'Reilly and Tushman 2004, 2008) suggests that co-ordination between the two parts of the organization should be loose, or mainly at the top management level. Yet, this is clearly not feasible with the incumbent firms in ecosystem competition, because the need for interaction in digital transformation is much larger (Haffke et al. 2017). Therefore, the digital resources for the digital ecosystem should be co-developed with the physical resources in the traditional competition arena. In our case, this is exemplified by the way Nordic Choice's (digital) reward system was designed to interact with the (physical) routines at the hotels.

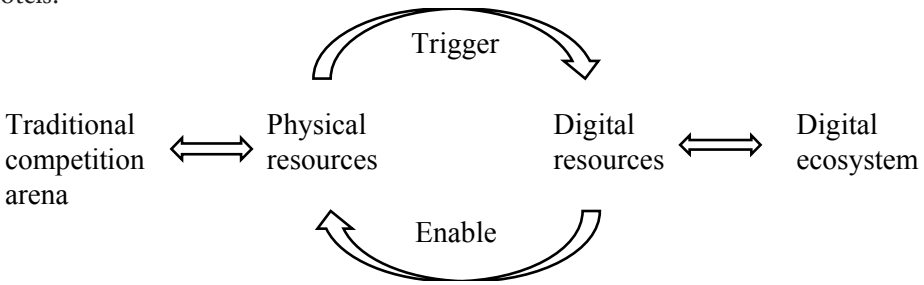

Figure 5. Self-reinforcing interactions.

At an operative level, there is therefore a need for ongoing interplay between the digital and the physical to strengthen the overall impact (Raguseo et al. 2017). In Nordic Choice's case, we saw self-reinforcing interaction in the loyalty program (see Figure 5). The physical meeting with hotel guests at reception is input to the loyalty program (second visit strategy) that triggers customers to use the app instead of OTAs. Another example is how the app is designed not only for booking but enables customers to access physical resources, such as check-in and unlocking room doors. A positive experience with these (physical) tasks will strengthen customers' intentions to stick with the (digital) loyalty program. Without these self-reinforcing interactions, both the traditional and the digital strategy will be less effective, as they will be executed in isolation from each other.

Overall, this implies that incumbent service firms certainly need a digital business strategy, but that is not all they need. First, incumbent firms cannot rely solely on digital business strategy, but must find ways to connect their digital business strategy to the strategy for the non-digital part of the organization. We argue that these findings contribute to a more nuanced picture for incumbent firms than established digital business strategy research (Bharadwaj et al. 2013) has implied. Second, we argue that the implementation of the digital business strategy should be ambidextrous (O'Reilly and

Tushman 2004) in that it is organized separately from the non-digital strategy, but still relatively integrated. And third, while we find Nischak et al.'s (2017) model of actors, value exchange and resources valid for incumbent service firms, we expand their view and argue that digital and non-digital resources have different roles, and must interact at all organizational levels. Particularly at the operational level, it is essential to establish self-reinforcing interactions between the digital and the physical.

5.3 Limitations and future research

This explorative study sheds light on how incumbent service firms can develop their digital business strategy. We acknowledge that there are many unresolved issues in this field, though. One limitation is that we studied the ecosystems of the hospitality sector, and the challenges in other service sectors may differ. Further, the large digital ecosystems of the world are unstable and dynamic, and the key issues of strategic positioning and competition may change in a relatively short amount of time. There are, in other words, rich opportunities for further research.

6 Conclusion

This study investigated digital business strategy for incumbent firms that compete in digital ecosystems, focusing on the hospitality sector. Digitalization and online travel agency (OTA) ecosystems, such as Expedia and Booking.com, have challenged the business models of traditional hotel chains.

Through a longitudinal study of the Scandinavian hotel chain Nordic Choice, we investigated the strategic and operational options of a large hotel chain competing with OTAs such as Hotels.com and Booking.com. Competition in digital ecosystems is indeed challenging for incumbent firms, requiring specialized competence and continuous manoeuvring in the digital landscape, while also competing in the traditional arena.

We propose that the key theoretical insight is the need to integrate firms' digital and non-digital resources and to establish self-reinforcing interactions between the two. We discuss how this can be accomplished with an ambidextrous strategy, that is, by establishing a separate organizational unit responsible for the digital business strategy, but with tight and continuous interactions with the physical parts of the firm.

Notes

1. Of course, the customer can also go directly to an OTA, which is exactly what OTAs encourage by building customer relationships. However, OTAs rely very much on Google and are among Google's largest customers worldwide.

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