DIGITAL TRANSFORMATION IN THE EGYPTIAN HOTELS: BENEFITS, DRIVERS AND CHALLENGES

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ABSTRACT

This research aims to study the benefits, drivers and challenge of Digital Transformation in The Egyptian hotels: Furthermore, several aspects related to the digital transformation in Egyptian hotels are highlighted in this study. To achieve the study objectives, a quantitative approach was used. In this respect, to collect data, the questionnaire targeted hotel managers and heads of departments in four- and five-star hotels which are located in the governorates of Aswan and Luxor. The current research pointed to some results concerning digital transformation in Egyptian hotels: benefits, drivers, and challenges. Hotel managers in Luxor and Aswan confirmed that their employees can partly apply digital transformation in each department of the hotel. Moreover, hotel managers emphasized that digital transformation contributes to reducing the time taken to complete business in hotels. Hotel managers agreed that the use of digital transformation would improve the hotel's performance. Furthermore, hotel managers agreed that the use of digital transformation contributes to reducing hotel costs, for example: reducing paper and printing costs by digitizing documents in hotels. Results confirmed that cyber threats and potential breaches are one of the challenges of implementing digital transformation in hotels.

KEYWORDS: Digital Transformation, benefits, drivers and challenge of digital transformation.

1. INTRODUCTION

In recent years, digital transformation has become a topic of great importance to researchers (Cheng, 2023). Furthermore, with the wide spread of the digital transformation concept, the conscious organizations tend to digitally transformed. However, digital transformation is a consistent networking of all economic sectors where actors have to adapt to new circumstances of the digital economy (Bondar, 201 According to Vial (2019), digital transformation refers to "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies. Furthermore, the digital technologies have influenced hotels' operation and performance, which are traditionally recognized as a labor-intensive industry (Iranmanesh, 2022). In this respect, hotel industry is one of the most influenced industries by these changes due to its nature as a human and information intensive industry. So any hotel want to survive and outperform its competitors have to adopt the proper information technologies (Elgohary, 2019) Adopting new information technologies provides several benefits for the hotel such as; improve customer service, streamlining business processes, improve operations, minimize costs, increase revenues, support decision making, shorten cycle times, rapid response to data analytics, respond to the market quickly and proactively, in addition to the strategic, operational, and tactical benefits (Abdel-Hamid, 2022). Furthermore, Choi, (2020), indicated that the digital technologies, such as self-service technologies, robots, block chain, big data analytics, mobile apps, social media, and information systems, can transform how hotels manage their operations and value chain. To adopt appropriate technologies, it is crucial that hotel managers know how various digital technologies may influence the performance of hotels (Antonio, 2019).

2. RESEARCH AIMS

The main aim of this research is to study benefits, drivers and challenge of Digital Transformation in The Egyptian hotels

3. RESEARCH OBJECTIVES

In order to achieve the aim of the study, the following objectives were developed:

OBJ1: To illuminate the benefits of implementing digital transformation in Egyptian hotels.

- **Obj2**: To explore the drivers behind implementing digital transformation in Egyptian hotels.
- **Obj3**: To explore the challenges behind implementing digital transformation in Egyptian hotels.

4. RESEARCH PROBLEM

Digital Transformation (DT) is an evolutionary process that uses digital capabilities and technology to add value to business models, operational procedures, and consumer experiences (Valeri, 2022) Furthermore, Nikopoulou *et al.,* (2023), called for exploring actual investments of hospitality industry firms in digital technologies. Likewise, Jayawardena *et al.,* (2023), called for exploring the level of significance and frequency of usage of these digital transformation activations over time. In this respect, Jayawardena *et al.,* (2023); Nikopoulou *et al.,* (2023); also called for the application of this study in other countries, so the current study will be applied in Egypt. Despite the technological progress in the current era, digital transformation in the field of hospitality industry is used sparingly in Egyptian hotels, and there are many hotels that have not applied digital transformation. Finally, based on a systematic review of previous studies, the research will focus benefits, drivers and challenges of Digital Transformation in The Egyptian hotels: of hotels in Luxor and Aswan for digital transformation.

5. QUESTIONS OF THE RESEARCH

Q1: What are the benefits of implementing digital transformation in Egyptian hotels?

Q2: What are the drivers behind the implementation of digital transformation?

Q3: What are the challenges facing digital transformation in Egyptian hotels?

6. LITERATURE REVIEW

6.1. A BRIEF HISTORY OF THE DIGITAL TRANSFORMATION

The digital revolution has changed society and the economy since the late 1980s. The emergence of a networked economy was the first, marked by the widespread use of broadband networks and the Internet (Hungerland et al., 2015). While digital transformation is currently a hot topic of conversation, the concepts of digital goods, services, and platforms were well known in the 1990s and 2000s (Schallmo *et al.,* 2021).

Between 2000 and 2015, there was a significant shift in how customers interacted with businesses due to the proliferation of smart devices and social media platforms. This shift also affected the expectations that customers had about response times and availability across many channels (Schallmo *et al.,* 2018). The current days, the emphasis is on mobile devices and exploiting the kinds of individualized consumer data that mobile technology can provide on a vast scale to create value for customers. By

utilizing this individualized data, businesses may more effectively customize their interactions, communications, and products to meet the unique demands of their clients (Schallmo *et al.,* 2018).

6.2. THE CONCEPT OF DIGITAL TRANSFORMATION

The concept of digital transformation originally surfaced in the literature in the late 1990s and has since been a prominent research topic because of the COVID-19 pandemic (Schallmo et al., 2018). There are various definitions of DT in the literature, but no consensus has been established on any of them.Digital transformation is the result of different digital innovations that take about novel artists, structures, practices, and values, that can change, disrupt, or complement current rules of the game within organizations or industries. (Alrawadieh *et al.,* 2021) Digital transformation, as opposed to simple automation, is the use of information and communication technology to create new capabilities in industry, public government, and society. (Kraus,2021).Digital transformation is a fundamental change process, enabled by the innovative use of digital technologies accompanied by the strategic leverage of key resources and capabilities, aiming to radically improve an entity and redefine its valuen proposition for its stakeholders.(**Melo, 2023)**

6.3. THE IMPLEMENTATION OF DIGITAL TRANSFORMATION IN HOTELS

➢ ARTIFICIAL INTELLIGENCE AND ROBOTICS

> Robots can assist staff members in carrying out their responsibilities or finish regular activities like cleaning and sanitization. Hotels employ robotics and AI to enhance the guest experience and maintain their competitiveness (Gaur *et al.,* 2021).

➢ BIG DATA ANALYTICS

> Big data analytics is a very important IT in business analysis and decision support for hospitality industries, which improves the availability of data. Big data analytics can optimize the operation, revenue, cost and competitiveness of different scenarios of the hotel industry (Pillai *et al.,* 2021).

➢ BLOCKCHAIN

> The management of the hotel supply chain is the most significant use of blockchain technology. Blockchain makes on-demand inventory purchase planning more precise by simplifying the supply chain. Transparency in the food supply chain is improved during COVID-19 by using blockchain technology to record information (Rashideh, 2020).

6.4. The benefits of implementing digital transformation in hotels

The digital environment plays an important role in reducing the costs borne by tourist hotels by reducing postal costs by replacing them with e-mail, replacing sending sales lists, technical bulletins and other hotel publications by making them available on the hotel's website, in addition to holding meetings using the remote meeting system to reduce transportation expenses and spread the epidemic, especially after the Corona pandemic (Elmogy, 2022). As stated by Kim et al. (2019). The way the hospitality sector treats marketing is one of the main advantages of the digital transformation, giving hotels and resorts the ability to draw in new business and keep hold of their current clientele more successfully than in the past ,there are many benefits that can be obtained when implementing digital transformation in hotels, including the following:

- ➢ Better customer experiences, by improving the customer experience and launching new products and services.
- ➢ Facilitating operations (operational improvements) by automating operational processes and improving internal communication for internal operations (Elmogy, 2022*).
- ➢ Changing the business model to enable hotels From expanding its reach to new customers and markets, launching new businesses and developing them (Press and Jabr, 2020∗).
- ➢ With digital transformation, hotels can collect data more efficiently and store it in one place (Maitra, 2021).
- ➢ Digital transformation helps improve communication with hotel guests (Badi *et al.,* 2021).

6.5. Challenges of implementing digital transformation in hotels

Moving to digital is not without its difficulties (Ali, 2023). It might be difficult to train employees, especially those who have spent years using manual techniques. It takes time, money, and experience to integrate new digital systems with current ones. Furthermore, the upfront cost of training and technology can be high. However, these early difficulties are frequently outweighed by the long-term advantages (Ali, 2023).There are many challenges facing or hindering the implementation of digital transformation in hotels, including the following:

- ➢ Weakness of actual measures taken on the ground to fully implement the digital transformation (Elmogy, 2022*).
- ➢ High material and technological costs required.

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*Reference in Arabic

➢ Difficulty in providing appropriate training in all hospitality and tourism sectors due to the high cost and time required for training (Zarzour, 2020*).

➢ The unwillingness of many tourist facilities to bear the financial cost of participating with the state and official government agencies.

➢ Lack of a culture of innovation and creativity to motivate workers and some people's unwillingness to use modern technology (Zarzour, 2020∗ and Shahi & Sinha, 2021).

➢ The large expenses required by the digital transformation process are one of the challenges of implementing it in the hotel (Alrawadieh *et al.,* 2021).

➢ One of the challenges of implementing digital transformation is that it avoids the human touch in hospitality (Popescu & Phi, 2019).

6.6. DRIVERS FOR IMPLEMENTING DIGITAL TRANSFORMATION IN HOTELS

The hotel sector anticipates that the changing circumstances will allow digital transformation to deliver innovation and new opportunities for industry and enterprise growth (Kraus *et al.,* 2021) Efficiency, cost-cutting, and sustainability are the main forces behind this transformation (Ali *et al.,* 2023). Furthermore, digital technologies minimize the demand for physical resources, simplify operations, and provide real-time data analytics (Mohsen, 2023). Additionally, by drastically reducing paper waste, digital operations can create a more sustainable corporate model (Broccardo *et al.,* 2023). In this respect, a cloud-based reservation system, for example, can reduce the likelihood of overbooking by instantaneously updating room availability across several platforms, doing away with the need for manual updates (Ali *et al.,* 2023).

There are several drivers for implementing digital transformation in hotels, which are as follows:

➢ In order to meet the multiple requests of guests for hotel services.

➢ Digital transformation contributes to improving and accelerating the completion of transactions and eliminating routine and bureaucratic work in hotels.

➢ Scarcity of resources and the urgent need for policies that contribute to the optimal investment of resources in hotels.

➢ Global trends (globalization) have contributed to openness, interconnectedness and integration at all political, economic,

*Reference in Arabic

social and administrative levels (Al-Farjani & Khalaf Allah, 2022∗).

7. THE METHODOLOGY

The methodology of the current research depends mainly on a questionnaire for heads of departments and hotel managers in four and five-star hotels located in the governorates of Aswan and Luxor which was used for collecting and analyzing the data required answering the study questions

7.1. QUESTIONNAIRE DESIGN

The current research used a questionnaire to collect data. The variables from the research study were used to create the questionnaire. Additionally, it was modified and updated from earlier research that the literature review referenced.

In this respect, the tool used in this study to gather data was a questionnaire. It includes several subjects, which are as follows:, Which include: (1) Drivers for implementing digital transformation in hotels, Which include, a scale it was improved and revised from previous researches (Ramdani et al., 2013; Park et al., 2015 and Nikopoulou et al., 2023). (2) The benefits of implementing digital transformation in hotels, a scale it was improved and revised from previous researches (Maitra, 2021; Badi et al., 2021; Xiao et al., 2022 and Wu, 2023). (3) Challenges of implementing digital transformation in hotels, it was improved and revised from previous researches (Popescu & Phi, 2019; Shahi & Sinha, 2021; Alrawadieh et al., 2021; Djevojić & Vitasović, 2023).The heads of departments and hotel managers' questionnaire was divided into two main sections.

7.2. STUDY SAMPLING TECHNIQUES

According to Egyptian Hotel Association (2024), the number of four star hotels reached 4 hotels in Aswan and Luxor governorate. On the other hand, the number of five star hotels reached 8 hotels in Aswan and Luxor governorate. Assuming that the number of heads of departments and hotel managers in the four-star hotels averages 10 managers. While the number of heads of departments and hotel managers in five-star hotels averages 15 managers Therefore, the size of the statistical population was as follows:

> ➢ **Number of managers of four star hotels** = 4 hotels x 10 managers = 40 managers
> ➢ **Number of managers of five star hotels** = 8 hotels x 15 managers = 120 managers
> ➢ **The total statistical population of managers** = 40 + 120 = 160 managers

In this respect, the researcher followed the comprehensive inventory method, so the researcher distributed 180 questionnaires to all managers,

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*Reference in Arabic

and 154 questionnaires were suitable for analysis, with a response rate of 85.6%.

7.3. RELIABILITY ANALYSIS OF QUESTIONNAIRE

Cronbach's α values of all variables of the current study exceeds 0.729 supporting sufficient measurement reliability suggested by Hair *et al.* (2010), there by the study measurements were acceptable and reliable.

> ## 8. RESULTS AND DISCUSSION

> ### 8.1. VARIABLES ANALYSIS

Table 3.1: Factor analysis of the drivers variable

Statements	Loading
Digital transformation contributes to improving the hotel's operational efficiency.	0.607
Digital transformation contributes to the practice of data-driven decision-making in the hotel.	0.753
Digital transformation helps you collect and analyze vast amounts of data about customer preferences, behaviors, and booking patterns.	0.865
Digital transformation helps you create marketing campaigns, loyalty programs and exclusive offers to encourage guests to come back again.	0.843
Digital transformation contributes to hotel cost savings.	0.605
Digital transformation contributes to the hotel's sustainability.	0.821
Sums of squared loadings	**0.839**

Table 3.1 shows that all statements scores ranged between 0.605 and 0.865 where it is bigger than 0.6 (Yong & Pearce, 2013). Hence, it is statistically valid. Furtheremore, the previous six statements are

responsible for the variance in drivers for implementing digital transformation in hotels with a percentage of 83.9 %.

Descriptive Statistics of drivers for implementing digital transformation in hotels variable

Table 3.2 : Descriptive Statistics of the Drivers Factor

Statement	Response	F	%	M	SD	R
Digital transformation contributes to	Strongly Disagree	-	-	4.29	0.71	4

Statement	Response	F	%	M	SD	R
improving the hotel's operational efficiency.	Disagree	6	3.8			
	Neutral	7	4.5			
	Agree	79	51.3			
	Strongly Agree	62	40.3			
	Total	154	100.0			
Digital transformation contributes to the practice of data-driven decision-making in the hotel.	Strongly Disagree	1	0.6	4.28	0.67	5
	Disagree	1	0.6			
	Neutral	16	10.4			
	Agree	75	48.7			
	Strongly Agree	61	39.6			
	Total	154	100.0			
Digital transformation helps you collect and analyze vast amounts of data about customer preferences, behaviors, and booking patterns.	Strongly Disagree	1	0.6	4.40	0.61	1
	Disagree	1	0.6			
	Neutral	7	4.5			
	Agree	74	48.1			
	Strongly Agree	71	46.1			
	Total	154	100.0			
Digital transformation helps you create marketing campaigns, loyalty programs and exclusive offers to encourage guests to come back again.	Strongly Disagree	1	0.6	4.38	0.65	3
	Disagree	1	0.6			
	Neutral	11	7.1			
	Agree	70	45.5			
	Strongly Agree	71	46.1			
	Total	154	100.0			
Digital transformation contributes to hotel cost savings.	Strongly Disagree	1	0.6	4.22	0.64	6
	Disagree	1	0.6			
	Neutral	15	9.7			
	Agree	85	55.2			
	Strongly Agree	52	33.8			
	Total	154	100.0			

Statement	Response	F	%	M	SD	R
Digital transformation contributes to the hotel's sustainability.	Strongly Disagree	-	-	4.39	0.63	2
	Disagree	1	0.6			
	Neutral	12	7.8			
	Agree	69	44.8			
	Strongly Agree	72	46.8			
	Total	154	100.0			
Overall				4.33	0.557	

F= Frequency   M= Mean   SD= Std. Deviation   R= Rank

Table 3.2 showed that:

- **"Digital transformation helps you collect and analyze vast amounts of data about customer preferences, behaviors, and booking patterns."** comes at a first rank with a mean (4.40) and std. Deviation of (0.61). This result agrees with Park *et al.,* (2015), who confirmed that DT helps collect and analyze vast amounts of data about customer preferences, behaviors, and booking patterns.

- **"Digital transformation contributes to the hotel's sustainability."** comes at a second rank with a mean (4.39) and std. Deviation of (0.63). This result agrees with Ramdani *et al.,* (2013), who confirmed that DT contributes to the hotel's sustainability.

- **"Digital transformation helps you create marketing campaigns, loyalty programs and exclusive offers to encourage guests to come back again."** comes at a third rank with a mean (4.38) and std. Deviation of (0.65). This result agrees with Nikopoulou *et al.,* (2023), who confirmed that helps create marketing campaigns, loyalty programs and exclusive offers to encourage guests to come back again**.**

- **"Digital transformation contributes to improving the hotel's operational efficiency."** comes at a fourth rank with a mean (4.29) and std. Deviation of (0.71). This result agrees with Ali *et al.,* (2023), who confirmed that DT contributes to improving the hotel's operational efficiency.

- **"Digital transformation contributes to the practice of data-driven decision-making in the hotel."** comes at a five rank with a mean (4.28) and std. Deviation of (0.67).

- **"Digital transformation contributes to hotel cost savings."** comes at a last rank with a mean (4.22) and std. Deviation of

(0.64). This result agrees with Ramdani *et al.,* (2013), who confirmed that DT contributes to hotel cost savings.

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The total mean of the drivers for implementing digital transformation in hotels was (4.33) with a standard deviation of (0.557), which indicated a high degree of agreement for all the of the drivers for implementing digital transformation in hotels phrases which means that this variable has a high level.

According to the above results, the fourth question of the current study was answered: " **Q4: What are the benefits of implementing digital transformation in Egyptian hotels?**". As well as, the fourth objective of the study was answered: "**Obj4: To illuminate the benefits of implementing digital transformation in Egyptian hotels.**".

The benefits of implementing digital transformation in hotels Validity of the benefits of implementing digital transformation in hotels variable

Table 3.3: Factor analysis of the benefits of implementing digital transformation in hotels variable

Statements	Loading
With digital transformation, hotels can collect data more efficiently and store it in one place.	0.740
Digital transformation helps improve communication with hotel guests.	0.805
Digital transformation helps increase guest satisfaction with the hotel.	0.682
Digital transformation helps the hotel respond quickly to guest requests.	0.765
Digital transformation helps reduce hotel costs, for example: reducing paper and printing costs through digitizing documents.	0.664
Sums of squared loadings	**0.643**

Table 3.3 shows that all statements scores ranged between 0.664 and 0.805 where it is bigger than 0.6 (Yong & Pearce, 2013). Hence, it is statistically valid. Furtheremore, the previous five statements are responsible for the variance in the benefits of implementing digital transformation in hotels with a percentage of 64.3%.

Descriptive Statistics of the benefits of implementing digital transformation in hotels variable

Table3.4 : Descriptive Statistics of the benefits of implementing digital transformation in hotels

Statement	Response	F	%	M	SD	R
With digital transformation, hotels can collect data more efficiently and store it in one place.	Strongly Disagree	-	-	4.41	0.57	3
	Disagree	1	0.6			
	Neutral	6	3.9			
	Agree	78	50.6			
	Strongly Agree	69	44.8			
	Total	154	100.0			
Digital transformation helps improve communication with hotel guests.	Strongly Disagree	1	0.6	4.35	0.56	4
	Disagree	-	-			
	Neutral	7	4.5			
	Agree	86	55.8			
	Strongly Agree	60	39.0			
	Total	154	100.0			
Digital transformation helps increase guest satisfaction with the hotel.	Strongly Disagree	1	0.6	4.27	0.58	5
	Disagree	-	-			
	Neutral	11	7.1			
	Agree	90	58.4			
	Strongly Agree	52	33.8			
	Total	154	100.0			
Digital transformation helps the hotel respond quickly to guest requests.	Strongly Disagree	1	0.6	4.43	0.61	1
	Disagree	-	-			
	Neutral	10	6.5			
	Agree	69	44.8			
	Strongly Agree	74	48.1			
	Total	154	100.0			
Digital transformation helps reduce hotel costs, for example: reducing paper and printing costs	Strongly Disagree	-	-	4.42	0.59	2
	Disagree	1	0.6			
	Neutral	8	5.2			

Statement	Response	F	%	M	SD	R
through digitizing documents.	Agree	72	46.8			
	Strongly Agree	73	47.4			
	Total	154	100.0			
Overall				4.37	0.510	

F= Frequency   M= Mean   SD= Std. Deviation   R= Rank

Table 3.4 showed that:

- **"Digital transformation helps the hotel respond quickly to guest requests."** comes at a first rank with a mean (4.43) and std. Deviation of (0.61). This result agrees with Xiao *et al.,* (2022), who confirmed that DT helps the hotel respond quickly to guest requests.

- **"Digital transformation helps reduce hotel costs, for example: reducing paper and printing costs through digitizing documents."** comes at a second rank with a mean (4.42) and std. Deviation of (0.59). This result agrees with Wu *et al.,* (2023), who confirmed that DT helps reduce hotel costs, for example: reducing paper and printing costs through digitizing documents.

- **"With digital transformation, hotels can collect data more efficiently and store it in one place."** comes at a third rank with a mean (4.41) and std. Deviation of (0.57).
- **"Digital transformation helps improve communication with hotel guests."** comes at a fourth rank with a mean (4.35) and std. Deviation of (0.56). This result agrees with Badi *et al.,* (2021), who confirmed that DT helps improve communication with hotel guests.
- **"Digital transformation helps increase guest satisfaction with the hotel."** comes at a last rank with a mean (4.27) and std. Deviation of (0.58).

The total mean of the benefits of implementing digital transformation in hotels was (4.37) with a standard deviation of (0.510), which indicated a high degree of agreement for all the benefits of implementing digital transformation in hotels phrases which means that this variable has a high level.

According to the above results, the fifth question of the current study was answered: "**Q5: What are the motivations behind implementing digital transformation in Egyptian hotels?**". As well as, the fifth objective of the study was answered: "**Obj5: To explore the drivers behind implementing digital transformation in Egyptian hotels.**".

CHALLENGES OF IMPLEMENTING DIGITAL TRANSFORMATION IN HOTELS

3.3.2.4.1 VALIDITY OF THE CHALLENGES OF IMPLEMENTING DIGITAL TRANSFORMATION IN HOTELS VARIABLE

Table 3.5: Factor analysis of the challenges of implementing digital transformation in hotels

Statements	Loading
You have employees who can adapt to digital transformation	0.711
Hotel staff shows discomfort or resistance when dealing with new technologies.	0.602
Cyber threats and potential breaches are one of the challenges of implementing hotel digital transformation.	0.601
The large expenses required by the digital transformation process are one of the challenges of implementing it in the hotel.	0.701
One of the challenges of implementing digital transformation is that it contributes to not enhancing the hotel customer experience	0.731
One of the challenges of implementing digital transformation is that it avoids the human touch in hospitality	0.641
Sums of squared loadings	**0.916**

Table 3.5 shows that all statements scores ranged between 0.601 and 0.731 where it is bigger than 0.6 (Yong & Pearce, 2013). Hence, it is statistically valid. Furthermore, the previous six statements are responsible for the variance in the challenges of implementing digital transformation in hotels with a percentage of 91.6 %.

3.3.2.4.2 DESCRIPTIVE STATISTICS OF THE CHALLENGES OF IMPLEMENTING DIGITAL TRANSFORMATION IN HOTELS VARIABLE

Table3.6 : Descriptive Statistics of the challenges of implementing digital transformation in hotels

Statement	Response	F	%	M	SD	R
You have employees who cannot adapt to digital transformation	Strongly Disagree	-	-	3.95	0.65	1
	Disagree	6	3.8			
	Neutral	7	4.5			
	Agree	79	51.3			
	Strongly Agree	62	40.3			
	Total	154	100.0			
Hotel staff shows discomfort or resistance when dealing with new technologies.	Strongly Disagree	1	0.6	2.93	0.91	6
	Disagree	1	0.6			
	Neutral	16	10.4			
	Agree	75	48.7			
	Strongly Agree	61	39.6			
	Total	154	100.0			
Cyber threats and potential breaches are one of the challenges of implementing hotel digital transformation.	Strongly Disagree	1	0.6	3.61	0.87	2
	Disagree	1	0.6			
	Neutral	7	4.5			
	Agree	74	48.1			
	Strongly Agree	71	46.1			
	Total	154	100.0			
The large expenses required by the digital transformation process are one of the challenges of implementing it in the hotel.	Strongly Disagree	1	0.6	3.43	0.93	4
	Disagree	1	0.6			
	Neutral	11	7.1			
	Agree	70	45.5			
	Strongly Agree	71	46.1			
	Total	154	100.0			
One of the challenges of implementing digital transformation is that it contributes to not enhancing the hotel customer experience	Strongly Disagree	1	0.6	3.22	0.91	5
	Disagree	1	0.6			
	Neutral	15	9.7			
	Agree	85	55.2			
	Strongly Agree	52	33.8			
	Total	154	100.0			
One of the challenges of implementing digital	Strongly Disagree	-	-	3.54	0.97	3

Statement	Response	F	%	M	SD	R
transformation is that it avoids the human touch in hospitality	Disagree	1	0.6			
	Neutral	12	7.8			
	Agree	69	44.8			
	Strongly Agree	72	46.8			
	Total	154	100.0			
Overall				3.45	0.516	

F= Frequency   M= Mean   SD= Std. Deviation   R= Rank

Table 3.6 showed that:

- **"You have employees who cannot adapt to digital transformation."** comes at a first rank with a mean (3.95) and std. Deviation of (0.65). This result agrees with Zarzour, (2020∗) and Shahi & Sinha, (2021), who confirmed that there is a Lack of a culture of innovation and creativity to motivate workers and some people's unwillingness to use modern technology.

- **"Cyber threats and potential breaches are one of the challenges of implementing hotel digital transformation."** comes at a second rank with a mean (3.61) and std. Deviation of (0.87). This result agrees with Djevojić & Vitasović (2023), who confirmed that Cyber threats and potential breaches are some of the challenges of implementing hotel digital transformation.

- **"One of the challenges of implementing digital transformation is that it avoids the human touch in hospitality."** comes at a third rank with a mean (3.54) and std. Deviation of (0.97). This result agrees with Popescu & Phi (2019), who confirmed that one of the challenges of implementing digital transformation is that it avoids the human touch in hospitality.

- **"The large expenses required by the digital transformation process are one of the challenges of implementing it in the hotel."** comes at a fourth rank with a mean (3.43) and std. Deviation of (0.93). This result agrees with Alrawadieh *et al.,* (2021), who confirmed that the large expenses required by the digital transformation process are one of the challenges of

implementing it in the hotel. Furtheremore, Zarzour (2020∗), confirmed that high material and technological costs are one of the challenges of implementing it in the hotel.

- **"One of the challenges of implementing digital transformation is that it contributes to not enhancing the hotel customer experience."** comes at a five rank with a mean (3.22) and std. Deviation of (0.91).

- **"Hotel staff shows discomfort or resistance when dealing with new technologies."** comes at a last rank with a mean (2.93) and std. Deviation of (0.91). This result agrees with Ali (2023), who confirmed that one of the challenges of implementing digital transformation is that it might be difficult to train employees, especially those who have spent years using manual techniques.

The total mean of the challenges of implementing digital transformation in hotels was (3.45) with a standard deviation of (0.516), which indicated a high degree of agreement for all the challenges of implementing digital transformation in hotels phrases which means that this variable has a high level.

According to the above results, the sixth question of the current study was answered: " **Q6: What are the challenges facing digital transformation in Egyptian hotels?**". As well as, the sixth objective of the study was answered: " **Obj6: To explore the challenges facing digital transformation in Egyptian hotels.**".

3.4 CORRELATIONS BETWEEN STUDY VARIABLES

Lehman (2005) found that values closer to -1 or 1, with a range of $-1 \leq r \leq 1$, imply a greater monotonic relationship when interpreting Pearson's correlation coefficient. Moreover, the following definition applies to the degree of correlation strength:

- ✓ **0 < 0.2   "Very weak"**
- ✓ **0.20 – 0.39 "Weak"**
- ✓ **0.40 – 0.59 "Moderate"**
- ✓ **0.60 – 0.79 "Strong"**
- ✓ **0 > 0.80   " Very strong"**

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*Reference in Arabic

Table 3.7: Correlations between study variables

DI	**Pearson Correlation**	.692**	.715**	.557**	1	.835**	-.264-**
	Sig. (2-tailed)	.000	.000	.000		.000	.001
	N	154	154	154	154	154	154
BI	**Pearson Correlation**	.453**	.495**	.481**	.835**	1	-.143-
	Sig. (2-tailed)	.000	.000	.000	.000		.077
	N	154	154	154	154	154	154
CI	**Pearson Correlation**	-.400**-	-.331**-	.052	-.264-**	-.143-	1
	Sig. (2-tailed)	.000	.000	.520	.001	.077	
	N	154	154	154	154	154	154

**Correlation is significant at the 0.01 level (2-tailed).

DI = Drivers for implementing digital transformation,
 BI = The benefits of implementing digital transformation,
 CI = Challenges of implementing digital transformation.

Table 3.7 revealed the following relationship between each pair of variables:
High correlation (marked relationship):

> Drivers for implementing digital transformation and the benefits of implementing digital transformation variables (r= 0. 835 , P= 0.000).

Low correlation (definite but small relationship):

> Organizational factors and challenges of implementing digital transformation variables (r= 0. 331 , P= 0.000).
> Drivers for implementing digital transformation and challenges of implementing digital transformation variables (r= 0. 264 , P= 0.001).

CONCLUSION AND RECOMMENDATIONS

After a discussion of the findings and answering the questions of the current research, the conclusion was drawn out and several recommendations were suggested.

4.1 CONCLUSIOn

In recent years, digital transformation has become a topic of great importance to researchers (Cheng, 2023). Furthermore, with the wide spread of the digital transformation concept, conscious organizations tend to be

digitally transformed (Bondar, 2017). In this respect, digital transformation refers to "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies (Vial, 2019). Furthermore, digital technologies have influenced hotels' operations and performance, which are traditionally recognized as a labor-intensive industry (Iranmanesh, 2022). However, the hotel industry is one of the most influenced by these changes due to its nature as a human and information-intensive industry. So any hotel that wants to survive and outperform its competitors has to adopt the proper information technologies (Elgohary, 2019). In this respect, adopting new information technologies provides several benefits for the hotel, such as; improving customer service, streamlining business processes, improving operations, minimizing costs, increasing revenues, supporting decision-making, shortening cycle times, rapid response to data analytics, and responding to the market quickly and proactively, in addition to the strategic, operational, and tactical benefits (Abdel-Hamid, 2022). Hence, this study aims to study the technological, organizational, and environmental factors of digital transformation in Egyptian hotels, including benefits, drivers, and challenges. To achieve the study objectives, a quantitative approach was used. To collect data, the questionnaire targeted hotel managers and heads of departments in four and five-star hotels located in the governorates of Aswan and Luxor. From April to June 2024 (the months when the fieldwork was applied). The current study pointed to some results concerning technological, organizational, and environmental factors of digital transformation in Egyptian hotels: benefits, drivers and challenges. The points of the conclusion can be presented as follows:

4.1.1 RESULTS OF HOTEL MANAGERS' QUESTIONNAIRE*:*

1. **Regarding drivers for implementing digital transformation in hotels:**
   - ➢ Hotel managers agreed that using digital transformation helps in collecting and analyzing huge amounts of data about customer preferences, behaviors and hotel booking patterns.
   - ➢ The results showed that digital transformation contributes to the sustainability of hotels.
   - ➢ Hotel managers confirmed that using digital transformation helps create exclusive marketing campaigns, loyalty programs, and offers to encourage guests to return to hotels again.
   - ➢ The results showed that digital transformation contributes to improving the operational efficiency of hotels.

> ➢ Hotel managers confirmed that using digital transformation contributes to the practice of data-driven decision-making in hotels.
> ➢ The results showed that digital transformation contributes to saving costs for hotels.

2. **Concerning the benefits of implementing digital transformation in hotels:**

> ➢ Results showed that digital transformation contributes to rapid response to hotel guests' requests.
> ➢ Hotel managers agreed that the use of digital transformation contributes to reducing hotel costs, for example: reducing paper and printing costs by digitizing documents in hotels.
> ➢ The results showed that digital transformation enables hotels to collect and store data more efficiently in one place.
> ➢ The vast majority of hotel managers confirmed that digital transformation helps improve communication with hotel guests.
> ➢ The vast majority of hotel managers confirmed that digital transformation helps increase guest satisfaction with the hotel.

3. **Concerning challenges of implementing digital transformation in hotels:**

> ➢ Hotel managers agreed that hotel staff cannot fully adapt to the digital transformation in hotels.
> ➢ Results confirmed that cyber threats and potential breaches are one of the challenges of implementing digital transformation in hotels.
> ➢ Hotel managers agreed that one of the challenges of implementing digital transformation is that it avoids the human touch in hospitality.
> ➢ The results confirmed that the large expenses required by the digital transformation process are one of the challenges of implementing it in hotels.
> ➢ The results showed that one of the challenges of implementing digital transformation is that it contributes to not enhancing the hotel customer experience.
> ➢ The results showed that one of the challenges of implementing digital transformation is that hotel staffs show discomfort or resistance when dealing with new technologies.

4.2 THE STUDY RECOMMENDATIONS

Based on the literature review and results of the current study, a sequence of recommendations may be identified to maximize the benefits of digital transformation in hotels, as follows:

4.2.1 RECOMMENDATIONS TO THE MINISTRY OF TOURISM & ANTIQUITIES AND EGYPTIAN HOTEL ASSOCIATION (EHA):

1. The Ministry of Tourism and Antiquities and the Egyptian Hotel Association should issue more legal legislation that supports the adoption of digital transformation in hotels.

2. The Ministry of Tourism and Antiquities and the Egyptian Hotel Association should cooperate with academic institutions to provide educational programs and hold courses for employees on digital transformation in hotels.

3. Working to raise awareness of digital transformation among hotel establishments and their employees by holding workshops, training courses and printing educational brochures, as the results confirmed that it contributes to improving hotel performance.

4. Providing hotels with appropriate technical programs to implement digital transformation in them, as the results confirmed that it contributes to the sustainability of hotels.

4.2.2 RECOMMENDATIONS TO HOTEL SENIOR MANAGEMENT:

1. Hotel senior management should provide training programs for hotel employees on digital transformation and how to apply it in their work, which contributes to achieving the hotel's goals.

2. It is necessary to contract with cybersecurity companies to provide appropriate protection for hotel data, in addition to protecting hotels from cyber-attacks.

3. Hotel senior management must provide full financial support to fully implement digital transformation in hotels, which contributes to raising the efficiency of hotel performance.

4. Hotel senior management must provide material and moral motivation to hotel employees to deal with new technologies.

4.3 FURTHER STUDIES

Future studies should focus on studying the relationship between digital transformation and increasing hotel revenues, as well as the possibility of implementing digital transformation in four-star and economic hotels.

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