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for Tourism and Hospitality (JAAUTH)**journal homepage: <http://jaauth.journals.ekb.eg/>**Internet of Things as an Instrument to Improve Businesses of Egyptian
Tourism Companies**

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ARTICLE INFO**Abstract****Keywords:**

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The Internet of Things provides excellent opportunities for the tourism industry to enhance customer satisfaction and to advance their products and services while simultaneously reducing operational costs. The aim of this article is to provide insights into the Internet of Things and explore how IoT solutions offer Egyptian tourism companies the opportunity to better serve their customers, improve operational efficiency and provide differentiated services. The survey was conducted among travel agents in Cairo from September to October 2024. All categories of travel agents participated in the survey. According to the Egyptian Travel Agents Association ETAA (2020), there are 1,275 travel agencies in Cairo. A total of 200 travel agencies were selected, representing approximately 15% of the total population, but only 350 responses were valid for statistical analysis. The main result of the research suggests that travel agencies should utilize IoT technology to fulfill people's needs and requirements. The study's findings indicate that the widespread implementation of IoT technologies has significantly restructured and enhanced the performance of key business processes in Egyptian tourism companies. Additionally, the findings provide new perspectives on the role of IoT, particularly in improving tourist satisfaction and reducing costs.

1. Introduction

The explosive growth of the Internet of Things is having a significant effect on the economy, life, and society. Internet of Things is essential to business operations. Internet of Things enables organizations to monitor their business performance in real time, offering insights into various aspects such as machine efficiency, supply chain, and logistics (Ly et al., 2023). Internet of Things enables companies to automate processes and reduce labor costs. It also reduces waste and improves service delivery, making production and delivery more cost-effective and providing transparency into customer transactions (Sreenath et al., 2022). The travel industry is one of the largest and most competitive fields, where customers want new ideas at reasonable prices. Because of strong competition and the demand for better services and pricing, businesses in this sector are leaders in using the Internet of Things (IoT). The IoT is likely to create a surge in the tourism sector because it can enhance communication and connectivity between devices, systems, and services. The Internet of Things is still in its

infancy and will revolutionize the travel industry (Nguyen et al., 2022). Future advancements in IoT will lead to greater progress in the tourism sector. Businesses need to integrate IoT into existing projects to benefit from future advancements. IoT technology provides various solutions for tourist destinations and businesses with the aim to draw in new visitors.

1.1.Objectives

- Investigating the possibility of using Internet of Things in tourism companies in Egypt.
- Analyzing successful global experiences of applying Internet of Things in tourism companies.
- Clarify the Challenges facing Egyptian tourism companies to implement the Internet of things and make recommendation for its development.
- Propose IoT for Egyptian travel companies that rely on technology to enhance accessible travel.

2. Literature review

2.1.Definition and concept of IOT

The term IOT was introduced by Kevin Ashton in 1999 (Marek & Woźniczka, 2017). after the explosion of the wireless devices market. The concept of the Internet of Things (IoT) refers to a system where physical objects could be connected to the internet through sensors. IoT is a network that can connect with anything anytime and anyplace by technologies of RFID (Radio Frequency Identification), WSN (Wireless Sensor Network) and 3G/4G/5G mobile communication (Nadindla, 2024). according to an agreed protocol, in order to identify, locate, track, monitor and manage smart objects. IoT is considered a major research and innovation stream leading to numerous opportunities for new services by interconnecting physical and virtual worlds with huge amounts of electronic devices distributed in houses, vehicles, streets, buildings and many other public environments (Schatten, 2016). The experience of recent decades shows, IoT represents a great opportunity for tourism and hospitality to increase customer satisfaction while simultaneously reducing operational costs. So, the paper considerations are devoted to contemporary application conditions of Internet of Things solutions in tourism companies.

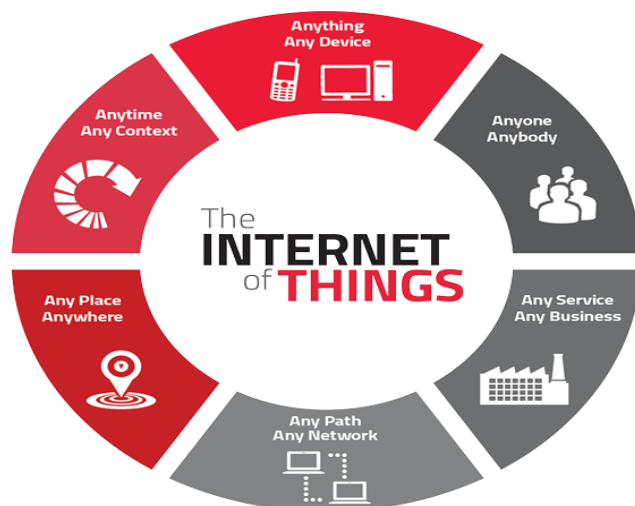


Figure 1. Concept of IoT

Source: Made by the author.

Characteristics of the Internet of Things These are as follows (Car et al., 2019): -

- a. Smart things have the ability to wirelessly communicate among themselves, and form ad hoc networks of interconnected objects.
- b. IoT made day to day life easy and we can do things automatically with using IoT technology. It includes many fields like smart environment.
- c. Smart things are identified with a digital name, relationships among things can be specified in the digital domain whenever physical interconnection cannot be established.
- d. Smart things can interact with the local environment through sensing and actuation capabilities whenever present.

2.2. Positive and Negative Impacts of IoT in the Tourism Industry

The IoT is already influencing various sectors, and the tourism industry is striving to keep up by staying continuously connected to its guests in hotels, transport, or attractions. The technology is still in the initial phases of development and application. This will have both positive and negative effects on the industry, and the transformation process will be fraught with numerous challenges.

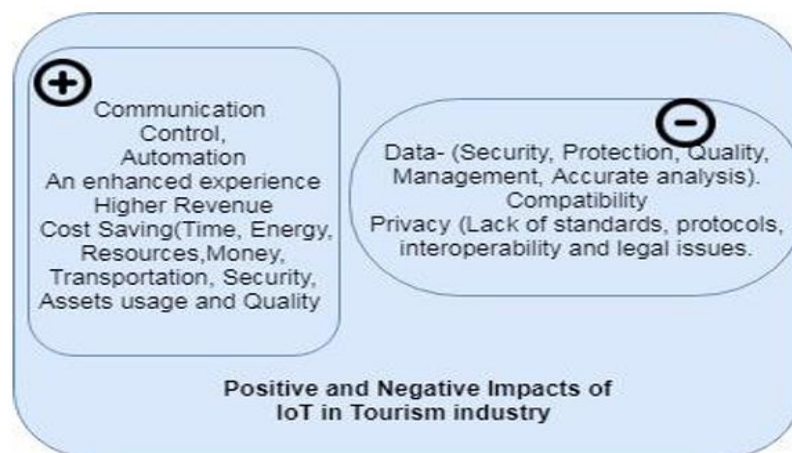


Fig. 2. Positive and Negative Impacts of IoT in the Tourism Industry

Source: Made by the author

The figure above shows the advantages and disadvantages of the Internet of things. While the negative impacts include concerns around data security from cyber-attacks and breaches, technological and regulatory challenges with data sharing and collection, installation costs, interoperability issues, the need to replace devices, harsh uncontrolled environments, self-sustainability of sensors, over-reliance on sensors, data security, data volume management, data authenticity, and lack of sufficient knowledge during training - the data itself will be useless unless it is properly analyzed and effective measures are taken to meet the desired requirements (Verma et al., 2021). The significant industry changes will also necessitate alterations and management of organizational structures before and after installation to ensure effectiveness. However, IoT remains a valuable smart energy and resource-saving tool for consumer convenience, as well as product and enterprise categories.

2.3. Internet of Things in Tourism Industry

The tourism industry involves numerous stakeholders and has a significant impact on the economy. Personalized travel experiences and customer-centric offerings are at the forefront of IoT innovations within the travel industry. The deployment of devices that supply the information and data required for real-time decision-making and predictive simulations must be supported by the local infrastructure for IoT adoption to be successful. As such, it is crucial for tourist destinations to implement a comprehensive system for collecting, analyzing, and distributing information among all actors in the value chain, thereby facilitating real-time decision-making for each party. IoT technology will shape the future of the tourism industry, providing a competitive edge through the inter connectivity of various devices, such as sensors, actuators, identification cards, and mobile phones (Vinh et al., 2023). Additionally, by linking intelligent devices, systems, and procedures, IoT is simplifying the operations of travel agencies, hotels, and airlines. The travel sector may improve operational efficiency and provide a more customized travel experience by utilizing IoT technologies.

2.4. IoT Applications in the Tourism Sector

Some of the most important IoT examples in the travel industry are the following: -

- a. **Personal Control:** A prominent application of IoT technology in the travel sector has been the potential to enhance personalization in hotels and on flights. This is mainly accomplished by granting customers greater control over various appliances or services via a centralized device, like a tablet or even their personal Smartphone (Jara and Butler, 2023).

With internet-connected heating, lighting, and TVs, customers can control these devices from anywhere. They can set a desired temperature and brightness level, and the devices will adjust automatically to keep those settings. Similar technology can also be applied on airplanes to manage the temperature of seats and air conditioning.

- b. **Seamless Travel:** A great application of IoT is enhancing customers' experiences as much as possible throughout all sectors of the travel industry. At airports, this could involve utilizing sensors and sharing details with travelers' Smartphones, alerting them when their bags are close, and helping them find it more quickly (Jara and Butler, 2023).

Hotels can make checking in easy by sending electronic key cards to guests' phones. When guests use these cards, they are automatically checked in without needing to visit the front desk. Additionally, sensors can alert restaurant staff when guests arrive and provide them with the correct table number.

- c. **Smart Energy:** Saving While IoT can facilitate personalization, it can also provide companies with financial advantages through automated or smart energy conservation. In a hotel, for example, internet-connected devices and sensors can enable continuous adjustments to the room temperature, ensuring that heating is utilized only when absolutely necessary (Orumwense and Abo-Al-Ez, 2022).
- d. A similar idea applies to lighting. Some hotels now use IoT technology to manage when lights are on or off. Sensors can tell how much natural light is in a room, which helps reduce the brightness of light bulbs. This way, less energy is used, and strong lighting is only on when there isn't enough natural light.
- e. **Location Information:** Companies in the travel sector can utilize the Internet of Things to provide location-specific information to customers and collect useful data. By integrating smartphone functions with beacon technology or other sensors, notifications can be delivered to travelers when they are most pertinent and based on their current location (Verma and Shukla, 2019). For example, notifications about local attractions

might include details on when they are least crowded, or alerts about nearby public transport options could also be dispatched. Additionally, messages and alerts could be sent depending on when guests are using particular hotel amenities at various times, allowing for adjustments in the required staff levels.

- f. **Maintenance and Repairs:** The Internet of Things is useful for IoT devices by giving real-time updates about their status and operation. This information is crucial for people in the travel and tourism sector, enabling the repair or replacement of important devices before they fail. For instance, hotel staff can be alerted if a radiator or light bulb is malfunctioning. Besides hotels, IoT can help airlines refuel planes more effectively or replace parts at the right time, ensuring safety while maximizing value (Karakuş et al.,2019). In essence, IoT connects everyday devices and appliances to the internet, allowing them to communicate. This connection brings many advantages to the travel industry, such as improving customer experiences and streamlining operations.
- g. **Interactive Museums:** Museums are adopting IoT technology to offer more engaging and immersive experiences for their guests. Through the inclusion of interactive components with IoT, museums can change static displays into dynamic, educational experiences (Hou, 2024).
- h. **AI-powered tourism information:** The IOT-powered AI system enables travelers to access tourism information more efficiently than ever before. These systems provide knowledge on-demand, real-time and personalized information based on traveler preferences and locations (Guo, 2016).

2.5. World successful experiences

IoT applications are another supportive application to the tourists and tourism which can connect smart devices. World successful experiences include the following: -

2.5.1. Sri Lanka

Tourism in Sri Lanka is the practice of individuals traveling from their home country to a particular place for leisure, business, education, medication or other purposes. Although smart devices and wearable devices used in tourism are attracting attention. Tourist destination basic needs comfortable accommodation, booking and other online services, food, tour guide / language guide to relevant places, maps and security measures. These activities are maintained by information and communication technologies utilizing IoT devices. Tourism companies are affected by different types of IoT devices, such as (Razeeth and Kariapper, 2020): -

- **Travel card:** It is a smart card for automating the payment of all tourism processes. Which can be customized according to the specified package of tourists, used in all transport services, shopping malls, hotels, restaurants and etc. In addition, all details of the tourist, such as personal, credit card and contact details, shall be provided by the travel card provider.
- **Electronic key card:** It is an electronic card used for check-in and check-out process at hotels such as SPG. These e-cards are sent to the tourist's smartphone to automatically notify the relevant hotel staff at the time of the tourist's check-in or check-out, and further help to avoid waiting at the front desk to notify about the movement of tourists in the hotel environment.

2.5.2. Norway

Narvik is a small city in Northern Norway. The Narvik area offers many attractions for visitors. It is becoming a popular travel spot, as it has not yet fully developed its potential for

tourism. The Tourist Information Office in Narvik is located in the city center. The following are ways the Internet of Things is used in that office (Mustafa et al., 2022): -

- **Smart Dashboard:** The Smart Dashboard, based on IoT technology, allows tourists to get answers to their questions without having to wait at the tourist information office. It also helps information officers receive updates from local operators. The screen organizes activities and attractions by category. An interactive touch screen will be placed in the Tourist Information office. Users first select a category, and then the screen displays the locations of those activities and attractions on a map. When a tourist clicks on a specific item, detailed information appears on the screen, which varies based on the type of activity.
- **Activities booking system:** Tourists have to book various activities, transportation, places to stay, and other travel services by themselves. This can make the booking process difficult for many travelers. Additionally, the planning and booking stages can become more complicated because tourists must choose from different options based on their preferences. An activity booking system using the Internet of Things (IoT) could help by automatically matching and showing booking options for tourists to select. Once they agree on the options, the IoT can automatically handle the booking process by accessing the necessary APIs from different booking platforms with the tourists' permission.

2.5.3. Malaysia

The use of IoT offers a huge advantage to the tourism sector in Malaysia. The adoption of IoT systems in current tourist attractions will enable monitoring of tourist attractions in museums and analyzing visitor responses using data and sensors. Travel booking sites are equipped with sophisticated algorithms that allow customization of consumer preferences. Personalized offers are sent based on the user's IP address and other relevant equipment. The data processing algorithm takes into account the profile of past bookings to track online searches related to tourism and analyze the preferences of potential customers (Borhanodin and Hashim, 2024).

2.5.4. China

The tourism industry is an important entry point for the application of IoT technology. Many Chinese cities and famous attractions are trying to combine IoT and smart tourism. Among the provinces, Hainan is one of the first countries to engage in this business. The province has integrated IoT with the construction of Hainan International Tourism Island and the establishment of tourism integration platform for tourism demand-oriented throughout the island an essential aspect of smart tourism is the advanced use of technology in popular destinations and the integration of IoT (Lui,2024). Smart tourist spots consist of Smart IoT can detect things in the geography, recognize natural disasters, observe tourist activities, monitor community members, manage staff, and assess the infrastructure of tourist spots using the internet. A data warehouse can deliver useful decision-making information and intelligent tourism services by creating a data center and extracting data. Cloud computing can hold large amounts of tourism data for searching and processing through an information platform for travel.

3. Research Methodology

The current study adopted qualitative approach that Data was collected through distributing questionnaire forms to identify the impact of the Internet of Things on improving Egyptian tourism companies. A survey has been conducted with travel agencies in Cairo from September 2024 to October 2024. This study has focused on all categories of travel agencies. According to Egyptian Travel Agent Association (2020), Cairo has encompassed 1275 travel agencies. A total of 200 travel agencies, approximate 15 % of the whole population have been selected, only 350 responses were valid for statistical analysis. Travel agencies in Cairo are chosen for two reasons. First, Egypt's capital is Cairo. It has the financial and technological capacity because it has the most travel agents in Egypt. Second, it is one of the cities that has the potential to become a smart city, which is regarded as one of the most crucial prerequisites for IoT implementation. These two main factors suggest that the application may be implemented successfully. The questionnaire form has involved Four main parts. The first one focuses on Demographic and work information of the respondents. the second part consists of 8 items demonstrating the application of Internet of Things technology in tourism companies can improve the management efficiency and service quality of the tourism industry.

4. Results

Table (1) shows the results from analyzing the demographic data of the sample variables. The frequency and percentage for each variable are provided based on the survey categories in the table.

Table 1. Demographic and work information of the respondents

Demographic and work information		Freq.	%
Age	20 – 39 years	157	44.8
	38 – 49 years	102	29.1
	50 years and above	91	26
Profession	Owner	91	26
	Employee	157	44.8
	Operation manager	102	29.1
Does your organization have a website	Yes	330	94.2
	No	20	5.7
How Often Should You Update Your Website's Content?	Daily	116	33.1
	Weekly	141	40.2
	Monthly	50	14.2
	Seasonal	25	7.1
	Yearly	15	4.2
	Never	3	0.8

The distribution of the respondents according to demographic data showed that 157 (44.8%) of the respondents are (20 to 39 years), followed by who are (38 -49 years) by 102 (29.1%), and finally who are (50 years and above) by 91 (26%). The majority of the tourism companies questioned have websites, and 33.1% of them update them every day. In contrast, 0.8% of the businesses never update or publish their service offerings because they lack websites.

This question included the results of the questionnaire forms distributed on the Egyptian tourism companies to find out what are the managers, supervisors and employees' opinions regarding the role of Internet of things as a modern trend as a Tool to Increase Customer' Satisfaction in the Egyptian companies and to Improve Businesses of Egyptian Tourism Companies. Frequencies and percentage distributions were used to shed the light on the impact

of Internet of things as a modern trend to reinforcing the competitive advantage in the Egyptian Companies establishments.

Table 2. IoT application can improve Egyptian tourism companies

Items	Freq.	Rank
Tourist satisfaction	50	4
A wide range of tourism services	59	3
Unified management of staff.	70	1
Integrated environmental management	63	2
Unified management of equipment operation and maintenance.	40	5

Allow to select more than one answer

The results of table No. (2) refer to the study sample's responses to the internet of things' applications can improve Egyptian tourism companies, As for Unified management of staff., came in the first place, The result shows that 70% of respondents have answered that through the use of the Internet of Things, staff scheduling is made easier by timely updates to each unit's recruitment, in-service, and out-of-service data. Regarding business responsibility, IoT technology is utilized to manage business responsibilities, including using RFID to record field personnel's presence, tracking employee arrivals, scheduling, and responding. In the end, the data generated by IoT is utilized to provide personnel performance (Chen et al.,2024).

As for Integrated management of the environment and facilities came in the second place, represented 63% of the sample, according to the majority of respondents, once IOT infrastructure equipment has been fully deployed in the scenic area, it will create an information network centered on the data center. By gathering a large number of IOT devices, GPS positioning, and remote sensing, it will be able to obtain spatial data about the information and process, which can be crucial for managing scenic area resources and environmental safety (Cao et al., 2020). It achieves all-around real-time control and management of scenic sites, which improves their management efficiency. In the context of real-time early warning, tourists call for assistance in the event of an emergency, natural disaster warnings, fire alarms, and unsafe crowd warnings.

While Abundance of tourism service content ranked third in the sample, Represented 59% of the sample, According to the respondents, the following features are included in the abundance of tourism service content: It gives tourists tickets and instructions on how to use them; It helps tourists locate the scenic locations they wish to see quickly and efficiently; It introduces tourists to the local culture so they can fully appreciate the area's unique charm; It offers catering, leisure, entertainment, and other services for tourists (He and al.,2024).

As for Tourist satisfaction, came in the fourth place, represented 50% of the sample, according to the respondents, the internet of things can give travelers better experiences with regard to their schedule, attractions, lodging, food, shopping, time, tour guides, cars, etc., which makes them more likely to return. While Unified management of equipment operation and maintenance ranked fifth in the sample (Virkar and Mallya,2018).

Table 3. Advantages and Disadvantages of IOT

Items	Freq.	Rank
Factor 1: Advantages of IOT		
Improved Quality of Life	148	5
Accomplish tasks quickly	301	1
Achieve customers' preferences	144	6
Business Innovation and New Opportunities	168	4
Improve customer experience	130	7
Save business time and money	200	3
Enhanced Operational Efficiency	252	2
Factor 2: Disadvantages of IOT		
Security and Privacy Concerns	135	5
Decrease the employee's skills	150	4
Interoperability and Complexity	168	3
Cause job losses	270	2
High Initial Costs	307	1

Allow to select more than one answer

From Table (3), it can be seen that there are many advantages of applying IOT in tourism companies from the viewpoints of respondents, which include Accomplish tasks quickly, Companies can speed up tasks by automating routine processes. This allows employees to spend more time on important and strategic activities. Enhanced Operational Efficiency, IoT devices streamline everyday tasks, automate processes, and provide valuable insights through data analytics, enabling employees to focus on high-value activities. Save business time and money, Business Innovation and New Opportunities, Improved Quality of Life, achieve customers' preferences as well as Improve customer experience, by implementing IoT technology, businesses can provide customers with real-time information and personalized experiences (Chen,2022). The second factor, IOT disadvantages, illustrates the negative impacts of using IOT in the travel industry such as High Initial Costs, Cause job losses, Interoperability and Complexity Decrease the employee's skills, IoT devices involve a lot of complex technology, and the errors are not always easy to locate & fix. It also requires extensive upskilling of resources. Also, Security and Privacy Concerns.

4.1.Challenges of adopting IOT in Egyptian tourism companies

The question has been formulated to identify challenges that have been facing the tourism companies to apply the Internet of things such as Cost of Implementation, Lack of Skilled Workforce, security concerns, Data Management and Analytics, poor technology infrastructure affects customer experience..... etc.

The majority of surveyed tourism companies, 67%, agreed that there would be implementation issues, while 33% disagreed, according to the analysis of respondents' opinions regarding the extent to which they may encounter issues when implementing the IoT. According to the results, the majority of the sample suggests that every issue that was presented was a genuine issue. These issues also make it difficult for application-based IoT technology tourism businesses to exist.

It is essential to identify suitable solutions to these critical issues to facilitate the adoption of Internet of Things technology by Egyptian tourism companies.

4.2.Strategy for future development

All respondents agreed on the following:-

- 1- Governmental efforts in outsourcing of activities of private sector and supporting them to enter field of smart technologies.
- 2- Involvement of government Egyptian tourism companies' telecommunication and cooperation between them to increase value in the field of applying modern technologies
- 3- Very strong technological structure should be established for Egyptian tourism companies.
- 4- Merging of IoT in physical infrastructures or smart devices to create contact point to tourists in Egyptian tourism companies.
- 5- Powerful communication network in structure of active companies in tourism sector.
- 6- Financial facilities of companies to utilize from IoT technology.
- 7- Public awareness of advantages and applications of IoT.
- 8- Conversion of traditional travel agencies to smart travel agencies.
- 9- Managers 'awareness in tourism sector of smart technologies and advantages for use of them in tourism.
- 10-Improvement of knowledge and training of managers for updated knowledge and application of smart technologies in tourism.

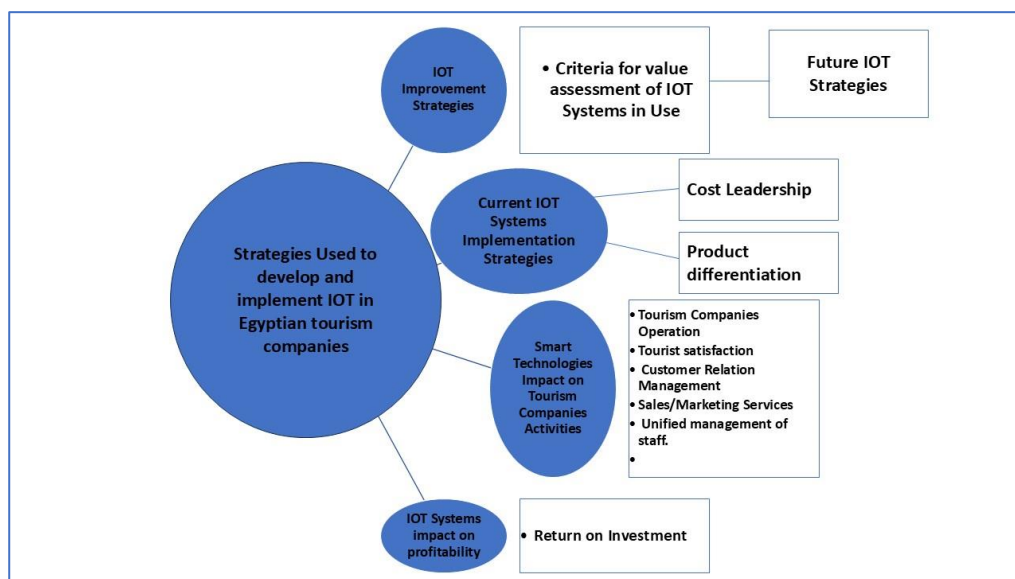


Fig. 3. A strategy for developing the Internet of Things in tourism companies

Source: Made by the author

5. Conclusion

This paper examines the impact of IoT on tourism companies in Egypt. the results showed that a number of results related to the importance of Internet of things and its role in enhancing Egyptian tourism companies. the IoT dimensions (application, costs, security) have a positive impact on customers' satisfaction. the results showed that IoT makes service easy and

facilitates the interconnection and communication of multiple devices, building a smart system that enhances operational effectiveness and delivers a customized and satisfying travel experience and by integrating IoT technology, tourism businesses can offer easier access, immersive experiences, and connected facilities to enhance the overall travel experience for tourists.

The successful global experiences of applying Internet of Things in tourism companies showed that today, the Internet of Things exerts a distinct influence on the operational dynamics of tourism enterprises. Despite the promising aspects of implementation the IoT, there are a number of challenges facing the implementation process that also ought to be considered, especially lack of technological infrastructure, special personnel and skills needed and high cost.

Table 4. SWOT analysis for using Internet of things in Egyptian tourism companies

SWOT analysis for using Internet of things	Strengths	Weaknesses
	<ul style="list-style-type: none"> -IoT solutions allow tourism companies to get better and useful insights in customer behavior. -IoT improves inventory management by automating inventory Visibility. - Positive cost effects for tourism businesses. -National Telecommunications Regulatory Authority examined all methods to promote IoT services in Egypt and also looked into all challenges preventing the spread of IoT services and how to address those challenges. Therefore, NTRA chose to release an IoT Framework in the Arab Republic of Egypt that includes all rules and procedures needed, in accordance with the terms and conditions of Law No.10 of 2003 on telecom regulation (National Telecom Regulatory Authority,2022). -Predictive analysis allows equipment maintenance energy management and estimating equipment failure before they occur. 	<ul style="list-style-type: none"> - protection of devices against hardware, network, software, and internet-based attacks in addition to physical tampering. -Deploying IoT devices requires high time and large money investment. -IOT devices produced by different manufacturers require specific configurations for integration.
	Opportunities	Threats
	<ul style="list-style-type: none"> - Raising awareness about the need for the Internet of Things. - creating job opportunities. - Advancing wave communication for enhanced bandwidths. - Software defined radios. - Collaborative communication. 	<ul style="list-style-type: none"> - compatibility between devices. -Use of unlicensed bands.

6. Recommendations

6.1. Recommendations for the government

- Ministry of tourism and antiques should enhance the of internet of things technology, providing digital experiences in place of physical one, in order to promote products and services.
- Offering technical and financial assistance to the Egyptian tourism sector to prepare for the implementation of IoT technology.
- The General Authority for Tourism Promotion should adopt IoT rather than traditional methods.
- Building a state-of-the-art digital infrastructure, including cloud computing, and providing access to publicly available data following a clear data governance model to regulate the sharing and ownership of consumer and corporate data to support the private sector in planning investments and operational decisions.
- Develop and adopt a policy framework for research and development focused on business opportunities through digital transformation.

6.2. Recommendations for Egyptian tourism companies

Concerning Egyptian tourism companies, it is necessary to consider the following recommendations: -

- Regular training and gaining expertise from global specialized organizations.
- Creating a unified application for all Egyptian tourism companies in Egypt.
- Providing training for staff and obtaining certifications or specialized documents.
- 4-Enhanced security measures.
- 5-Establishing collaboration among travel agencies, tour operators, and service suppliers in order to lower the application's cost.
- 6-Supporting travel agencies by governmental authorities.
- 7-Enhancing the infrastructure of technology.
- 8-Resolving the application's financial problems.

The results of this study offer a promising start, suggesting that the insights gained from this investigation could potentially enhance the performance of Egyptian tourism businesses and improve the vacation experience for travelers.

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إنترنت الأشياء كأداة لتحسين الأعمال بشركات السياحة المصرية

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المعلومات المقالة	الملخص
<p>الكلمات المفتاحية</p> <p>إنترنت الأشياء؛ السياحة؛ الأعمال؛ التكنولوجيا؛ الرضا السياحي.</p> <p>(JAAUTH) المجلد 27، العدد 2، (2024)، ص 155-169.</p>	<p>يمثل إنترنت الأشياء فرصة كبيرة للسياحة لزيادة رضا العملاء والترويج لمنتجاتهم وخدماتهم مع تقليل التكاليف التشغيلية في نفس الوقت. يهدف هذا البحث إلى تقديم نظرة ثاقبة على إنترنت الأشياء واستكشاف كيف توفر حلول إنترنت الأشياء فرصاً لشركات السياحة المصرية لخدمة العملاء بشكل أفضل، وزيادة كفاءة العمليات وتقديم خدمات متباينة. تم إجراء مسح مع وكالات السفر في القاهرة في الفترة من سبتمبر 2024 إلى أكتوبر 2024. ركزت هذه الدراسة على جميع فئات وكالات السفر. وفقاً لجمعية وكلاء السفر المصرية (2020)، شملت القاهرة 1275 وكالة سفر. تم اختيار 126 وكالة سفر، تمثل حوالي 15% من إجمالي السكان، ولم يكن هناك سوى 350 رداً صالحاً للتحليل الإحصائي. تشير النتيجة الرئيسية للبحث إلى أنه من الأفضل لوكالات السفر تطبيق تقنية إنترنت الأشياء لتلبية احتياجات ومتطلبات الأشخاص. تشير نتائج هذه الدراسة إلى أن اعتماد تقنيات إنترنت الأشياء يعيد تصميم وتحسين أداء جميع العمليات التجارية الرئيسية في شركات السفر المصرية ويمكن أن يكون مفيداً جداً في قطاع السياحة. علاوة على ذلك، تعطي النتائج نظرة ثاقبة جديدة لدور إنترنت الأشياء، لا سيما فيما يتعلق بتعزيز رضا السياح وخفض التكاليف.</p>