

Research Article

**EVALUATION OF PUSHKAR ON SMART TOURIST DESTINATION PARAMETERS**

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**ABSTRACT**

**Background:**

The emerging concept of the intelligent tourist destination interlinking with smart cities focuses on the advanced technological implementation in the urban development. The tourism sector in smart cities offer new strategies, opportunities and challenges and thus incorporates smartness to the intelligent destinations. This connects physical world to the digital world altogether and referred as Smart Tourism Destinations. It is observed that the performance of smart tourist destination varies as per geographical areas and thus their evaluation varies while keeping some common basic parameters.

**Aim:**

The paper aims to evaluate tourist destination Pushkar on the parameters of smart tourist destination which are Technology, Human Dimension, Infrastructure and Sustainability and proposes a tabular guideline for examining the challenges faced by the destination.

**Research Method:**

The paper will be descriptive and secondary data is used for statistical evaluation.

**Result:**

The paper will help in analyzing destinations on the basis of smart destination parameters and the challenged faced by them while implementation process of smart destination concept.

**Conclusion:**

The destinations while implementing smart tourist destination parameters face numerous challenges and further work is needed to understand a destination's adaptability towards smartness.

**KEYWORDS:** Smart Tourism Destination, Sustainability, Smart City, Technology, Infrastructure, Tourism Management

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## **1. INTRODUCTION**

The term smart city means a place that uses advance Information, communication and technologies in order to provide core infrastructure, decent quality of life to its citizen, its visitors, and ensuring smart solutions through sustainable development. The keyword Smart is connected with progress, future vision and being capable of working with technologies summing up to be intelligent. Not even a single city has attained all the parameters of smart city or destination. Each city in the world has its own perspective, culture, geographical boundaries and people's lifestyle. On the basis of these differences, Smart city basic dimensions- Technology, People and Institution are suggested by Nam et al. (2011). Indian tourism board has also supported the dimensions especially on Infrastructure for the Smart city development. In view of Smart city, tourism plays a significant role and goes along with its core concept. It helps the growth and development of existing destinations towards right direction. The application of smart concept gives a unique edge to destinations making them more responsible and reliable. As per Gretzel et al. (2019a), Smart tourism destination connects stakeholders (hoteliers, restaurant owners, travel agents, handicraft & souvenir units, transport, local residents, tourists) to the digital world by bringing a common platform for faster communication and offering customized services. Smart destination parameters are further extension of smart city concept and its dimensions. This research paper will assess and evaluate an old, famous and existing tourist destination, Pushkar, India. On the basis of basic parameters of a smart destination, Pushkar will be intensively evaluated on terms of Technology, Human, Infrastructure and Sustainability. The actions and strategies taken by the government to enhance the quality of services will be discussed and a proper tabular guideline with basic parameters will be proposed. Pushkar is progressing towards enhancing its services and being connected with a declared developing smart city, Ajmer, it is reaping the benefit of the development. The road to reach the level of being a smart destination keeps on evolving and brings various challenges with the development and evolution which will be discussed in the chapter.

## **2. EXTENSION OF SMART CITY TO SMART DESTINATION AND ITS PARAMETERS**

With the growth of more and more urbanization, cities are competitively trying to become more efficient in solving day to day with newly arising problems and complexities and struggling in maintaining proper balance. There is a new approach that has attracted the urban to move further and find out solutions which might help them to think about their future stand. According to Nam et al. (2011), cities continue in its rise of complexities and along with deteriorating its functions and proposed three-dimensional concept of a smart city- Technology, People and Institution. The word 'Smart' carry a comprehensive framework to develop a destination and adapt as per with the surroundings. The concept of Smart City is defined through various conceptual and theoretical perspectives. According to Washburn et al. (2010), smart city can be achieved by upgrading the use of technology and computing while Giffinger et al. (2010) mentioned that the smart city performance will be judged not only on technology but on economy, people, communication and governance as well. According to Rios (2008), smart city stands for shared culture, life, motivation for its residents to make them more progressive and creative in their life. As per Smart City guidelines of India (2015), there is not one way of defining a smart city as it varies from country to country and region to region. For Smart City Project, working concept has been taken which supports four pillars for overall development- institutional, physical, social and economic infrastructure with sustainability and proper use of technology.

Smart destination is considered to be an important attribute of smart city in which the concept of smart being applied in perspective of tourism in cities. These cities then get an advanced outlook inside and outside by inculcating the principles of being smart and hence referred as smart destinations. The new keyword has become goal for many existing destinations and they have started to work towards it. Smart Tourist destination is defined as “An innovative tourist destination, built on an infrastructure of state-of-the-art technology guaranteeing the sustainable development of tourist areas, accessible to everyone, which facilitates the visitor’s interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents’ quality of life.” (SEGITTUR, 2018, Buhalis et.al., 2013, Lamfus et.al., 2015). Smart cities like Seoul are adopting new and innovative methods to enhance its touristic experiences (Gretzel et.al., 2018) to keep them forward in this competitive environment. Getting the title of potential smart destinations is considered to be a boon and tends to give the existing destinations an unique edge in tourism sector thus, making them more reliable for tourists. To become a potential candidate, the parameters of a smart destination can be applied to existing destinations. Although, it is a continue process and constant need up-gradation to maintain the title. Many established destinations like Spain is paving their way towards adopting smart tourism and smart destination standards and working on their services and products to achieve it (Gahr, 2014; Gomes & Baidal, 2018). Smart cities consider the needs of its residents and local governance while smart tourist destinations consider range of stakeholders and their interests involving residents, businesses, governance and tourists.

The basic parameters to define a smart tourist destination are widely covered by many authors. Buhalis and Amaranggana (2015) suggested the dimensions of a smart tourism development can be achieved through competitiveness, overall development and sustainability. Boes et.al. (2015) advocated the inclusion of productivity and innovation towards development of social capital, business practices, and human involvement. While enhancement of touristic experiences needs to be on priority for smart tourism destination (Gretzel et.al., 2015), co-operation and co-creating among various stakeholders are also important. The five layers for describing smart tourism in given by Gretzel et.al. (2018) suggesting first layer for human and natural resources, second layer for implementation of technology to physical world, third layer to be a data storage and usage, fourth layer for business practices and fifth layer be on the top priority i.e. touristic experience enhancement. The European Commission (2018) follows the parameters for attaining a smart tourism destination which are technology, accessibility, cultural heritage, sustainability and digitalization. SEGGITUR (2018), which is a smart destination project promoted by Spain Government advocates the four parameters for smart tourism system which are Technology, Sustainability, Innovation and Accessibility. The enhancement of existing destinations towards smartness cannot be achieved with the above said parameters which can be clubbed under Technology, Human involvement, Proper Infrastructure and Sustainability. When combining with the smart city guidelines and different parameters of smart destinations, we propose four basic parameters of a smart tourist destination covering the overall development and futuristic approach. Further, using a table, we will evaluate the popular and existing tourist destination, Pushkar to know its qualification as having potential of becoming a smart destination.

### **3. TOURISM IN PUSHKAR, AN EXISTING DESTINATION**

The Pushkar is located in Indian state of Rajasthan, India, just about 15 km from Ajmer (one of the declared and developing smart city of India). It is a well-known and most famous tourist destination across the world as it has only Lord Brahma temple (God who created the entire

world) and hosting one of largest international 5-day Cattle/Camel Festival in the world. There are around 400 temples and historic infrastructures around the holy and sacred Pushkar Lake. Tourism is the main source of survival and income generator sector here along with trade, commerce, handicraft, transportation and household items. The cattle fair is believed to be the source of 80% of the annual income, generated by the local people of here (Pushkar Tourism board). In 2018, the number of foreign tourists' flows in Pushkar is 109904 which is greater than in 2017 which was 101673 whereas there is a balance of domestic tourists flows around the year from 2017 -2019 (Annual Tourism Progress Report, Rajasthan, 2019-20). The Central government has launched a tourist scheme PRASHAD to bring more development and growth in Pushkar-Ajmer region. Ajmer is one of the 100 developing smart cities in India and its connectivity with Pushkar helps in the development of highly efficient tourism in the area and emerge as smart destination. According to Rajasthan Tourism board, a Development Master Plan has been initiated with time period of 2011-2031 which is contributing heavily on the development of the Pushkar region and its tourism. With the support of local communities, government and contributors, new growth and development is taking place where the major concern is given for taking initiatives sustainably in order to preserve the essence of the city which is as old as the oldest epic of the world.

#### **4. EVALUATION OF PUSHKAR ON SMART TOURIST DESTINATION PARAMETERS**

Pushkar is considered as Magnet town which contributes heavily to Ajmer's economy through tourism. By following proposed parameters of Smart Destination in Table 1, Pushkar would be evaluated. As per the secondary data of the Pushkar, its tourist report and Master plan of 2011-2031 of Rajasthan Government, we will evaluate and analyze its growth and development according to below mentioned parameters and their components in Table 1.

**Table 1. Basic Parameters of a Smart Tourist Destination**

| <b>Parameters</b>     | <b>Components</b>  |
|-----------------------|--|
| <b>Technology</b>     | Smart  |
|                       | Virtual  |
|                       | Digital Networks   |
| <b>Human</b>          | Stakeholders (Hoteliers, restaurant owners, travel agents, handicraft units, Tourists) |
|                       | Government   |
|                       | Smart Community  |
|                       | Social Capital   |
| <b>Infrastructure</b> | Physical   |
|                       | Accessibility  |
|                       | Accommodation  |
| <b>Sustainability</b> | Environmental  |
|                       | Social   |
|                       | Economic   |
|                       | Human  |

**Source: Buhalis and Amaranggana (2015); Boes et.al. (2015); Gretzel et.al. (2015, 2018); SEGITTUR (2018); European Commission (2018)**

#### **4.1 Technological Parameter**

In the era of Globalization, smart and more advance technologies keeps getting upgraded everyday like mobiles phones, virtual applications etc. and people are blending with them easily than before. Local craftsmen, tradesmen are happily incorporating technology in providing their services and products as well as communicating with their customers. The glimpse of famous Pushkar fair through virtual tours, online tour packages, detailed information about destination in official website of Rajasthan([www.tourism.rajasthan.gov.in](http://www.tourism.rajasthan.gov.in)) are enhancing the tourist experiences and providing local tour operators new opportunity to offer customized products and services. Digital networks are showing its benefits on a large scale to various tourism stakeholders including tourists, for interaction, business purposes as well as feedbacks and opinions. The online booking, online payment, online availability of data of a destination makes the tourist and stakeholders very participative with less consumption of time. The local artisans also promote their products and become famous through Facebook pages, YouTube, Instagram channels etc. The famous food stalls of Israeli foods, Falafel etc are quite branded through digital networking and one can easily witness the crowd in evening to these stalls all influences through digital media and digital marketing. The presence of government backed e-mitra cafes one can easily access internet at very cheap cost with interactive staff. There are many websites that are fully dependent on promotion of Pushkar fair and provide detailed itineraries, accommodation bookings, online booking for participation in competitions, information and customized tours ([www.pushkarmela.org](http://www.pushkarmela.org); [www.pushkar-camel-fair.com](http://www.pushkar-camel-fair.com)).

#### **4.2 Human Parameters**

##### **4.2.1 Stakeholders**

The involvement of stakeholders of tourism in Pushkar is well coordinated. Pushkar represents a town for its religious nature, promoter of yoga and meditation, hub of painters, researchers, bloggers from all around the world and supporter of accepting the blend of various foreign cultures into it. We have conducted a pilot study on stakeholders on the parameters of smart destination. Here are their views on it.

- **Hoteliers & Restaurant Owners:**  
The hotels and restaurant owners are aiming for getting eco-friendly certification to bring their service more upgraded. There are several backpacker themed hostels and dormitories like Zostel are booming up which provides adequate facilities like Wi-Fi, clean rooms, library, small café etc. to attract the tourists. The restaurant owners are adopting modern café culture with amalgamation of their cultural outlook. One can see folk music on play with staffs dressed up in Rajasthani attire while tourists enjoying different food from around the world. The hotels and restaurant owners are taking bookings online and get their customers by good review left on various blogging sites of travelers about their services.
- **Travel Agents:**  
Travel agents in Pushkar are quick in adopting technology in providing their services by customizing it to the needs and purpose of tourists. From offering online tour packages, online bookings and online transactions to always be in connect with their tourists through social media platforms, local tour agents offering services like helping

researchers for local studies, providing customized tour to painters and many more. With the support from government, they are providing jeep and camel safaris and hot air ballooning which further enhance their business.

- **Handicraft & Souvenir Units:**

The local handicraft and souvenir owners who are earlier dependent on their offline sales and word of mouth are now increasing their business by taking big orders from tourists from overseas and exporting their goods by using technology and social media. The tourists who had earlier came for pleasure finds the local sellers as good suppliers with authentic products and rates. This creates more interaction, goodwill and bond among these important stakeholders.

- **Tourists**

The tourists are important stakeholder who contributes heavily in the development of tourism to the destination. The upcoming tourists are now very technology friendly and believes on internet search results and reviews before using any service provider. This makes the service providers also responsive on utilizing technology to promote their business. Instagram posts, Facebook page, Tripadvisor reviews of many cafés like Nirvana in Pushkar is gaining huge crowd because two bloggers wrote very praiseworthy article about them in their Instagram posts.

#### **4.2.2 Government**

Central and State government has taken several initiatives to conserve the rich heritage, for which various schemes have been sanctioned by the government like HRIDAY, aiming on bringing economic growth and heritage conservation, Amrut Smart cities which focuses on building adequate infrastructure, PRASHAD focusses on Pilgrim rejuvenation, Pushkar Beautification project and many more.

#### **4.2.3 Smart Community**

The local communities are adapting with the changing of tourist trends. The community has been dependent on tourism majorly and adopting technologies in providing their services. Use of Social media platforms, getting feedbacks and reviews from customers online, updating their payment system through online and introducing new partnerships with difference stakeholders using e-commerce are some of the major changes the local residents are inculcating.

#### **4.2.4 Social Capital**

Ajmer-Pushkar tourist circuit is developing as a religious tourism where majorly income generator business is providing touristic services to customers. With the effort of local community and local stakeholders, other trades like handicrafts, rose cultivation, ethnic garment production is growing leading to increment in social capital. There are various strategies and actions being taking place as per Pushkar Master Plan(2011-2031). The strategies like project clean and green which focusses on reducing pollution, focusing on creation of low-degrading tourist infrastructure and increment of entertainment touristic activities for income generation.

#### **4.3 Infrastructure Parameters:**

Infrastructure supports numerous superstructures and constructions for the development of an existing tourist destination.

#### **4.3.1 Physical Infrastructure**

The Physical infrastructure combines with technology which involves components like integrated web services, dash board, smart database resources like database server and smart network. The technology needs to be blended smoothly with public institutions, private bodies, schools, universities, offices, banks, voluntary organizations and among citizens for real engagement. There is frequent use of social media, free access to internet cafes by government in the form of e-mitra (digital cafe), where internet cafes are in functional and free for residents as well as tourists for getting internet services.

#### **4.3.2 Accessibility**

##### *Road Network*

The circuit Merwara-Marwar in which Ajmer-Pushkar falls is well connected with roads with National Highway NH8). Ajmer is centrally located and has good connectivity to rest of the declared tourist circuits of Rajasthan.

##### *Airport*

Jaipur Airport (International) is located in distance of 130 km from Ajmer-Pushkar region. The airport well connects major cities like Mumbai, Delhi etc. An international flight directly to Dubai has started from Jaipur. In keeping the mind to improve the air connectivity issue, a new domestic airport at Kishangarh is developed to increase the tourist arrival in Pushkar and Ajmer.

##### *Rail Network*

The rail connectivity form Ajmer to major cities is well developed. Shatabdi Express, runs fastest from Ajmer to Delhi and reaches Delhi by 6.5 hours.

#### **4.3.3 Accommodation**

The typical stay duration of the foreign tourist in Pushkar is five days. A domestic tourist, on the contrary, stays either at Ajmer or at Pushkar according to their religious beliefs. The average staying period of foreign tourists is 4 days and is high during Pushkar fair. During the Pushkar Fair approximately 750 tents are provided by RTDC. The tents are managed by RTDC as well as private hotel chains like The Taj etc. During Fair, RTDC setup temporary tourist village having standard tents, huts, dormitories and camps.

#### **4.3.4 Attractions**

In Pushkar City, the heritage sites and temples are major attractions. With inclusion of famous festivals and fairs, this small city pulls the attention of visitors towards its support of eternal religion and acceptability of various cultures while promoting its traditional one. The city makes the visitors involved in the touristic activities such that they feel they are part of the community through participating in many competitions and activities etc. Major attractions are Pushkar fair in October-November, Brahma Temple, Savitri Temple, Pushkar lake and ghats. Attractions in exterior of Pushkar city are Dargah of Khwaja, Ajmer, Merta (temples and ruins, Kishangarh (paintings), Mangliyawas (Kalpa Vriksha), Roopangarh (Fort), Baghera (archaeological sites, lakes, temple ruins). As per to Indira Gandhi National Centre for the Arts lists, 362 heritage sites are identified around Pushkar.

#### 4.4 Sustainability Parameters:

##### 4.4.1 Environment

It is the term often applied to destination to make them more eco-friendly and less harmful. With the more vulnerability of the destinations being affected by disasters like over tourism, spread of disease etc, sustainability emerges as a protective measure to entrust a destination before visiting them in real. The cleaning of Ghats of Pushkar lake on daily basis by locals and volunteers and establishing rules and regulations for visiting and bathing hours has made Pushkar lake beautiful again. In view of dealing environmental issues, proper waste and disposal management committee has been working.

##### 4.4.2 Social

There is active participation of local community and local residents in keeping the Pushkar lake clean, safe and offer a magical view of the lake by voluntarily participating in collecting waste from banks as they offer their prayers and take holy bath. Even tourists are volunteering for the same. In Pushkar fair, tourists are witnessed as active participants along with local residents to take part in various competitions and establishing bonding with each other.

##### 4.4.3 Human

The participation of local government, NGOs and Tourist Assistant Force along with local police has taken measures especially in 2019 to regulate overcrowding like restricting the movement of animals participating in competitions at their respective days. Also, the camel safaris are further allocated to certain places only to avoid any accidents.

##### 4.4.4 Economic

The implementation of governmental schemes to provide equal opportunities to local handicrafts and other service providers helped in reduction of leakage. With the implementation of technology now the local small shop owners are directly exporting their supplies without any middlemen thus incrementing their income sustainably.

### 5. CHALLENGES

Becoming a smart destination is a continuous process and according to the evaluation, it is to find out that the Pushkar master plan(2011-2031) along with participation of various stakeholders is contributing towards its more growth and acceptance. However, Pushkar is still in its developing and initial phase and facing various challenges as explained in Table 2.

**Table 2. Major Challenges in Pushkar in Tourism Development**

| <b>Dimensions</b> | <b>Major Issues and Challenges</b>   |
|-------------------|--|
| <b>Technology</b> | <ul style="list-style-type: none"> <li>• The advanced technologies like Artificial Intelligence and Virtual Reality is still not have been implemented.</li> <li>• Many local stakeholders still rely on traditional way of doing business.</li> <li>• The constant need of updating in following modern technologies is quite slow with a smaller number of e-mitra cafes and foreign exchange services.</li> </ul> |
| <b>Human</b>      | <ul style="list-style-type: none"> <li>• The government schemes are effective but their</li> </ul>   |

|                       |  |
|-----------------------|--|
|                       | <p>implementation to the region is slow to reap the effective benefit.</p> <ul style="list-style-type: none"> <li>• The rules and guidelines are not effectively made aware to the local stakeholders and need to be informed on social media platforms.</li> <li>• The hoteliers and restaurant owners are not gaining enough financial support to enhance their services.</li> <li>• The local travel agents are facing huge competitions from big tour operators especially during Pushkar fair.</li> <li>• The handicrafts and souvenir shops owners are still struggling with technology and not getting much support to retain their business.</li> <li>• The branding and promotion of Pushkar and its attractions need more involvement to create more attention.</li> </ul> |
| <b>Infrastructure</b> | <ul style="list-style-type: none"> <li>• The various infrastructures like cafes, hostels need to be upgraded.</li> <li>• There is need for more touristic development of infrastructure like hotels, malls and guesthouses.</li> <li>• The attractions need to be properly managed and supervised constantly to maintain their beauty.</li> <li>• The connectivity to nearby touristic places needs to be more efficient.</li> </ul>   |
| <b>Sustainability</b> | <ul style="list-style-type: none"> <li>• Mismanagement of Parking near Brahma temple</li> <li>• The conditions of animals especially camels are not good with lacking of proper medical assistance.</li> <li>• Overcrowding and Mass gathering during Pushkar Fair and religious activities.</li> <li>• Waste disposal is not done on daily basis.</li> <li>• Stray animals wander all around which brings danger to tourists and locals.</li> <li>• Pilgrim/Visitor Security is a concerned issue.</li> <li>• Depletion of Ground water resulting in ecological imbalance</li> <li>• Reduction in tourists due to epidemics leads to economical crisis.</li> </ul>  |

**Source: Pushkar Master Plan (2011-2031)**

The challenges are numerous and they keep on changing as per new developments. Each parameter brings different perspective of evaluating a destination on their growth in right direction.

### **6. Suggestions**

While keeping in mind of positive changes of applying smart destination parameters to Pushkar suggestions are made to provide some alternate solutions to the challenges it is facing.

- The declaration of major heritage sites for recreational purposes like Man Mahal (Palace) as Yoga Centre or Meditation Centre, Nagar Palika (City governance) building as a

library with café and Kota Kunj (Kota Bank) as cultural Centre or for light and sound show.

- The various stakeholders need a single window platform where they can interact with any information and database they need.
- The local handicrafts need to be educated through skill development programs on using technology in their business.
- There is need of proper coordination of TAF (Tourist Assistance Force) and Tourist police in providing safety and security to the visitors.
- With large number of visitors and tourists, their movement is needed to be channelized and limited to avoid overcrowding.

### **7. Conclusion**

For the upcoming years, the approved master plan of developing Pushkar and its tourism is a remarkable measure. This continuously gives time to the government as well as local bodies to adapt new changes as per need of becoming a smart destination. During evaluation of each parameter, there is positive outlook of Pushkar came up which shows that the destination and its stakeholders are trying to adapt with the emerging technologies and it is bringing new opportunities and tourists to them while maintaining the essence of the region. However, going through secondary data and discussions with stakeholders, it is found that there are some ecological and cultural issues in the town due to lack of awareness, irregular use of allocated and lack of active participation of local residents in new methods of providing touristic experiences and services. This shows the immense struggle and confusion among stakeholders on how to carry out further to preserve the spiritual and cultural values of the holy town. There is an urgent need of skill development workshops and programs that will help in the local residents and service providers to understand the importance of sustainability and technology. There is further need of future work in analyzing how to overcome the endless problems while implementing the parameters of smart tourist destination to an existing destination and avoid the negativity it brings with itself.

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