Leveraging digital technologies to differentiate tourism in emerging markets

The case of Saudi Arabia

Introduction

The digital revolution has profoundly transformed the tourism sector, reshaping how travelers research, plan and experience their journeys. Online platforms and digital tools have made information about destinations more accessible, enabling travelers to explore options, compare prices, and book accommodations and activities with ease. Social media has also emerged as a powerful influence, with user-generated content and reviews shaping travel decisions. Virtual tours and Augmented Reality (AR) experiences allow potential visitors to preview destinations before committing, while mobile apps enhance the on-ground experience by offering real-time navigation, language translation and personalised recommendations. Data analytics enables tourism providers to tailor their services, improving customer satisfaction and fostering loyalty.

Digitisation is expected to continue propelling the tourism experience towards becoming more seamless, frictionless and high-quality. While tourism companies are incorporating digital technologies to boost overall productivity and profitability, governments have a role to play in planning for the development and growth of their tourism sectors and in leveraging the power of digital to that end. For example, Japan's e-visa system and the Australian government's partnership with airlines to streamline bookings served as important initiatives to introduce digital solutions in tourism.

Tourism is a key driver of Saudi Arabia's future growth, with the Kingdom leveraging its rich cultural and natural heritage to attract visitors from around the world. Home to UNESCO World Heritage sites, such as AlUla and Diriyah, as well as the the Red Sea on its west coast, the country has an ambitious goal of welcoming 150 million tourists by 2030.

As part of its digital tourism strategy, launched at LEAP 2022, Saudi Arabia is leveraging AI to attract both regional and international travelers. This has effectively enhanced visitor engagement by personalising experiences, streamlining travel planning and maximising the Kingdom's unique assets - its history, heritage and culture.

This paper examines global best practices in lharnessing digital technologies across the tourism value chain to enhance the industry's growth and provides recommendations on how Saudi Arabia use the power of digital to differentiate and enhance its tourism sector and the tourist experience. In light of the Kingdom's growing stature as a tourist destination and the recent announcement of its hosting of the 2034 FIFA World Cup, it has become ever more important for the country to develop compelling experiences for tourists; digital technologies may prove an important enabler in achieving this goal.

Digital applications across the tourism value chain

The tourism value chain comprises multiple stages that collectively define the traveler's experience from pre-arrival to post-departure. Each stage provides opportunities to leverage digital solutions that optimise efficiency, personalisation and satisfaction. In emerging markets, these opportunities can be especially transformative, as robust digital adoption can help leapfrog traditional barriers, enabling destinations to quickly catch up with or even surpass established tourism hubs. Below is a closer look at each stage of the tourism value chain and how digital technologies can be deployed.

Product planning and development

The first stage in the tourism value chain involves identifying, creating and enhancing destinations, attractions and experiences. Digital Geographic Information Systems (GIS) can aid governments and developers in locating sites with high tourism potential, evaluating environmental impact and planning supporting infrastructure. By using data-driven analytics, national tourism boards can focus investments on regions likely to yield the greatest return on visitor satisfaction and economic growth.

Moreover, crowdsourcing platforms and community engagement apps enable local stakeholders to collaborate in product development. These platforms gather insights on local culture, sustainability concerns and must-see attractions, ensuring that newly developed or refurbished sites resonate with authentic community narratives. This approach can help emerging destinations build products that are both culturally rich and market-ready.

Destination marketing and promotion

Destination marketing has undergone a revolution with the advent of social media, influencer marketing and Search Engine Optimisation (SEO). A robust digital presence now extends well beyond a simple website or static online ads. Cutting-edge destinations use immersive 360-degree videos, AR features on social media platforms and storytelling techniques that highlight traveler experiences.

Influencers, bloggers and travel vloggers can be powerful allies in destination promotion – especially in emerging markets seeking to break stereotypes or build new travel narratives. By collaborating with relevant social media personalities, tourism boards can rapidly expand awareness and generate authentic interest among diverse traveler segments. In addition, well-structured SEO ensures that destination websites rank high in online searches, while retargeting campaigns and personalised email marketing can keep potential travelers engaged over time. This is especially important for emerging tourist destinations. Targeted, data-driven marketing can build awareness around their unique offerings and ensure resources are focused on reaching potential visitors most likely to visit, rather than using a broad, untargeted approach.

Booking and reservations

The booking stage is critical for converting traveler interest into tangible sales. Online booking platforms, mobile apps and AI-enabled chatbots now play pivotal roles in this conversion process. In emerging destinations, ensuring these digital channels are user-friendly, reliable and globally accessible is vital for overcoming any lingering apprehensions potential visitors might have.

Chatbots powered by Natural Language Processing (NLP) can provide quick answers to common queries regarding visas, accommodations or local customs. Machine learning algorithms can tailor package recommendations based on browsing history or stated preferences. Blockchain-based solutions are also beginning to gain traction, offering secure, transparent transactions that can build trust, particularly for high-value bookings such as luxury travel packages. Blockchain's decentralised and encrypted structure ensures that transaction data is tamper-proof and resistant to fraud, offering peace of mind for large transactions.

Travel and transportation

Once travelers have made their bookings, the journey from their home to the destination sets the tone for the overall experience. Airlines and other transport providers use digital platforms for online check-in, seat selection and real-time flight status updates. Some tourism boards integrate ridesharing apps and local transportation schedules into a single platform, making it easy for travelers to navigate upon arrival.

Digital border control systems – such as e-visas, electronic travel authorisations or biometric immigration gates – streamline entry procedures, allowing travelers to save time and minimise queues. This frictionless arrival sets a positive precedent for the rest of the trip, reflecting how digital innovations can improve efficiency at critical junctures of the journey.

On-site experience

The on-site experience is where emerging destinations have the greatest opportunity to differentiate themselves. AR and Virtual Reality (VR) can enrich visits to historical and cultural sites by providing interactive storytelling overlays. Imagine a traveler at an ancient fort, scanning a QR code and suddenly seeing a reenactment of how the part of the fort they're standing in was defended centuries ago. These immersive experiences deepen engagement and enhance the site's appeal.

Geolocation-based mobile apps offer personalised itineraries, real-time crowd management information and curated culinary recommendations. Gamification elements – such as digital scavenger hunts or loyalty challenges – can encourage travelers to explore lesser-known spots, thereby distributing visitor traffic more evenly while showcasing local gems. In addition, digital translation tools break down language barriers, fostering deeper connections between tourists and local communities.

Tourism support services

Beyond entertainment, support services are key in elevating traveler confidence. Telemedicine apps help tourists access healthcare remotely, while digital insurance platforms provide instant coverage options in case of unexpected cancellations, medical emergencies or lost luggage. Some hotels use mobile check-in and smart room controls to provide a seamless, contactless experience. These innovations not only boost traveler convenience but also enhance safety – an increasingly important factor in post-pandemic tourism.

Seamless exit and post-travel engagement

The final stages include the departure process and post-travel follow-up. Automated border control, easy digital customs declarations and quick baggage tracking reduce the stress of leaving a destination. Immediately afterward, retargeting campaigns and email follow-ups can encourage travelers to share experiences on social media, leave reviews or consider future travel. Advanced analytics can then tap into this rich feedback and behavioural data to refine offerings and develop personalised future itineraries.

Digitisation across the tourism value chain creates a virtuous cycle: streamlined travel experiences feed into higher satisfaction rates, which, in turn, generate positive reviews and online word-of-mouth. By harnessing these tools effectively, emerging markets can leapfrog traditional barriers and position themselves as forward-thinking, customer-centric destinations on the global stage.

Global best practices

As destinations worldwide race to attract international travelers, several have distinguished themselves by seamlessly integrating digital innovation into their tourism ecosystems. Countries such as Singapore, Japan, Estonia, Australia, the UAE, Finland and Spain stand out for their pioneering approaches. Their success stories offer insightful lessons that emerging markets, including KSA, can adapt to local realities and aspirations.

Singapore

Leveraging data and smart technologies

Over recent years, Singapore earned its reputation as a leading smart nation by applying data-driven strategies across almost every industry – including tourism. The Singapore Tourism Board (STB) employs advanced analytics to identify visitor preferences and tailor marketing campaigns accordingly. Smart kiosks provide interactive city maps and event listings, while the country's extensive free Wi-Fi network ensures tourists stay connected. Even public spaces like the Gardens by the Bay utilise sensor technology to manage visitor flows and streamline crowd distribution, enhancing safety and optimising the visitor experience. In addition, the Singapore Land Authority (SLA) manages *OneMap*, an official GIS-based platform offering location-based services for both residents and visitors; travelers can use it to locate attractions, plan routes and access real-time information on transit or traffic. Singapore's tourism industry thrives on a holistic approach that integrates public and private services, harnessing analytics for targeted tourism marketing and ensuring city-wide internet connectivity – all working in concert to foster real-time engagement and positive feedback from both local and international visitors.

Japan

Blending tradition with futuristic experiences

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Estonia

Digital governance as a blueprint for tourism

Estonia, though small in size, is a digital powerhouse with frictionless visa applications and digitised communication with local tour operators. The Baltic nation's forward-thinking e-residency programme and robust digital identity framework have enabled smaller tourism businesses to set up operations, accept payment, and communicate with internal customers entirely online - often without relying on large intermediaries. By providing secure online platforms for registrations, financial transactions and customer engagement, Estonia's e-governance ecosystem allows these businesses to handle booking directly from anywhere in the world. This ease of doing business not only reduces overhead costs but also increases the global competitiveness of Estonia's local tourism operators.

Australia

Digital governance as a blueprint for tourism

With its diverse landscapes – from the Great Barrier Reef to the Outback – Australia's tourism push relies heavily on mobile technologies that help visitors plan long-distance trips with confidence. Tourism Australia's apps offer curated itineraries, ecological guidelines and real-time safety alerts, including bushfire and extreme weather warnings. Additionally, government partnerships with airline apps streamline bookings and visa processes. By focusing on mobile-first solutions, the country ensures travelers can adapt their plans on the go. Australia has also been successful at centralising digital platforms that unify flight, visa and on-ground activities to streamline the visitor experience.

The UAE

High-tech luxury experiences

From AI-driven passport control to virtual concierge services, the UAE invests heavily in technology that exudes luxury and convenience. Biometric smart gates at Dubai International Airport reduce immigration checks to seconds. Meanwhile, attractions such as the Museum of the Future incorporate interactive displays, VR and AR to immerse visitors in forward-looking themes. Dubai has successfully leveraged immersive technologies to reinforce a luxury brand image and elevate the overall destination experience.

Finland

Sustainable tourism through digital management

Finland, known for its pristine landscapes, focuses on sustainability. Tourism bodies use data analytics to monitor footfall in fragile ecosystems and manage visitor capacities. Online platforms encourage travelers to book nature experiences in designated areas and at recommended times, minimising environmental impact. The country also promotes contactless payments and streamlined digital ticketing for trains, ferries and long-distance buses, reducing paper waste.

Spain

Integrating cultural heritage with digital tools

Spain, one of the top tourist destinations in the world, marries cultural heritage with cutting-edge digital tools. The country's tourism websites and apps offer virtual tours of UNESCO World Heritage sites, helping travelers plan itineraries before arrival. Real-time translation services are commonly embedded in major museums, while mobile ticketing for public transport in cities like Barcelona and Madrid enhance mobility. To encourage repeat visits, loyalty apps track museum entries and cultural events attended, offering discounts for subsequent trips

Lessons learned from global best practices

Across the world, several countries have been successful at leveraging digital technologies to enhance tourism across the value chain. Looking at some of these success stories, several overarching themes emerge.

Firstly, a robust digital infrastructure – particularly seamless mobile connectivity and secure payment gateways – form the foundation for leveraging digital in tourism. Secondly, data and analytics enable many of the innovations that support a healthy tourism sector such as targeted marketing, smart queue management and personalised visitor experiences. Furthermore, immersive technologies such as AR and VR are increasingly being used to differentiate cultural and heritage destination experiences. Finally, collaboration across the tourism ecosystem – between governments, the private sector and local communities – is critical in ensuring that digital solutions have the desired impact in delivering both economic gains and authentic experiences.

For emerging markets like KSA, selectively adopting these best practices can accelerate progress and help establish a unique, tech-forward brand identity in tourism. By understanding local culture, market needs and technology readiness, KSA can maximise the returns on digital investments and ensure these solutions remain flexible and scalable in the years to come.

Unlocking Saudi Arabia's tourism potential

KSA is rapidly emerging as a prominent tourism market, driven by its ambitious Vision 2030 plan to diversify the economy and reduce reliance on oil. With significant investments in infrastructure, the Kingdom aims to become a global travel destination. Saudi Arabia's tourism sector is now soaring past all previous records, testament to the country's commitment to becoming a global tourism hot spot. Last year, the sector grew by more than 32% to contribute a record-breaking SAR 444.3 billion to Saudi GDP, representing 11.5% of the entire economy. This exceeded the previous record by almost 30% and underscores the sector's pivotal new role in the Kingdom's economic framework. Saudi Arabia's tourism sector is poised for further growth, fueled by visionary investments, diverse projects and a strategic digital transformation. The sector is expected to have continued growing at pace in 2024, with GDP contribution set to reach SAR 498 billion, while jobs will increase by more than 158,000 to reach nearly 2.7 million.

This growth is driven to a large extent, by a coordinated, multifaceted strategy that includes creating world-class resorts, restoring historical sites, highlighting the country's dramatic natural landscapes and habitat, and developing festivals, events and other leisure activities. New future-forward luxury resorts provide attractive getaways for young tourists, while newly restored heritage sites – notably Diriyah Gate Development, Turaif and AlUla – provide tourists with options to explore cultural hubs. Saudi Arabia's rapidly expanding lineup of international sports events – such as Formula 1 and Formula E Grand Prix, LIV Golf, boxing matches and the Saudi Cup – has significantly boosted the nation's appeal to global travelers, extending beyond just sports enthusiasts.

Most recently, FIFA's announcement of the decision to host the 2034 World Cup in Saudi Arabia lends further promise to the Kingdom's forecasted growth as a tourism destination. The FIFA World Cup presents a significant opportunity for Saudi Arabia's tourism sector to showcase the Kingdom's cultural heritage, modern attractions and natural beauty to a global audience. Digital innovation can amplify the impact of the World Cup on Saudi Arabia's tourism sector by creating seamless, immersive and engaging experiences for visitors and global audiences, strengthening its position as a world-class tourist destination and ensuring lasting benefits for its tourism sector.While the development of mega-projects and the restoration of heritage sites is well underway, the country must now turn their focus to destination activation and management. The country has largely been successful at raising awareness around its tourist destinations and attracting travelers, the logical next step would be to invest in differentiating the tourism experience at various destinations and increasing tourist spending. The Kingdom must also intensify efforts to attract private investors – especially foreign investors – with well-targeted value propositions. Maintaining an understanding of evolving travel trends and adjusting its strategies accordingly will also be pivotal for Saudi Arabia's transition from an emerging to a well-developed tourist destination.

How to leverage digital to differentiate the Saudi tourism experience

The Kingdom has been largely successful at positioning itself as an attractive tourist destination, having surpassed its Vision 2030 tourism goal of attracting 100 million visitors annually by 2023 seven years ahead of schedule.

To further support its burgeoning tourism industry, Saudi Arabia should leverage the power of digital to create differentiated destination experiences, attract foreign investors, connect different players in tourism and promote sustainable growth.

Immersive technologies to differentiate destination experiences

From VR previews of UNESCO Heritage Sites to AR-guided tours of Red Sea resorts, immersive tech can create unforgettable destination experiences. Government support for startups and tech firms in this space can ensure ongoing innovation tailored to Saudi Arabian culture and destinations. Incorporating AR and VR into cultural experiences can help make heritage tourism more appealing to younger audiences, as these generations are already familiar with the technology. ABout 63% of Gen Z and 51% of Millennials have used AR, while 75% of Gen Z and 53% of Millennials have tried VR. This makes immersive tech a powerful tool to make heritage tourism more appealing and interactive for younger travelers.

Leveraging data analytics to attract foreign investors

Real-time data on traveler behaviour, preferences and feedback provides a powerful tool for driving tourism planning and investment. More specifically, by using data analytics built on travel trends, the Saudi Tourism Authority can target the most promising foreign investors through highly personalised campaigns and ensure that resources are invested in the most lucrative projects.

A one-stop shop to integrate the tourism ecosystem

A national Saudi tourism portal could serve as a one-stop shop for prospective and current travelers, connecting private and public players in the tourism ecosystem. This portal would integrate visa applications, accommodation and activity bookings, ride-hailing services, event listings and cultural insights. By aggregating services from both public and private sectors, the portal can offer a seamless user experience that mirrors best-in-class platforms from leading digital nations. Furthermore, a national tourism portal can empower local communities by enabling ease of doing business in the tourism sector, generating additional revenue streams for these communities, enabling locals to kickstart businesses and attract more consumers.

Leveraging digital to promote sustainability

Digital technologies can promote sustainable tourism by enabling efficient resource management through data analytics and fostering eco-friendly travel choices via digital platforms. They can also be used to enhance awareness and promote sustainable behaviours around the Kingdom's heritage sites, ensuring that tourism remains a lucrative industry for generations to come.

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