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A Study on Smart Hotel Marketing Models in the Digital Era

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Abstract: In the digital era, the deep integration of the Internet of Things (IoT), big data, and artificial intelligence (AI) is reshaping the competitive landscape of the hotel industry. Smart hotels have emerged as a key direction for industry upgrading, and their marketing models are encountering both new opportunities and challenges. This study systematically analyzes smart-hotel marketing models in the digital context. By examining evolving consumer needs and shifts in decision-making pathways, it explores opportunities in data-driven strategies and channel innovation, while also identifying practical constraints such as data integration and the balance between technological inputs and marketing effectiveness. Building on these insights, the paper proposes an innovation pathway centered on data-driven decision-making, content renewal, end-to-end journey services, and ecosystem collaboration. The goal is to offer theoretical and practical guidance for transforming hotel marketing from transactional touchpoints to relationship-oriented engagement.

Keywords: Digital era; Digital marketing; Marketing model; Smart hotels

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1. Introduction

With the deep integration of the Internet of Things (IoT), big data, and artificial intelligence (AI), the digital wave is profoundly reshaping the structure and competitive paradigm of the hotel industry. As a key direction of industrial upgrading, smart hotels face unprecedented opportunities and challenges in their marketing models. On the one hand, emerging technologies provide strong support for precise consumer insights, enhanced service experiences, and innovative communication channels; on the other hand, consumer decision-making paths are becoming increasingly social and experiential, imposing higher demands on personalized services and seamless end-to-end experiences. Against this backdrop, traditional marketing strategies can no longer meet the requirements of the new market environment. The construction of a new marketing model that is data-centered, experience-oriented, and technology-driven has become a critical question for smart hotels seeking to strengthen core competitiveness and achieve sustainable development. This study aims to systematically examine the

current state of smart-hotel marketing in the digital era and to explore, in depth, pathways for building innovative marketing models, thereby offering theoretical references and practical guidance for industry application.

1.1. Overview of smart hotels

A smart hotel refers to a property that possesses a comprehensive, integrated system of intelligent services. By applying digital and networked technologies in concert, it progressively advances the informatization of hotel management and service processes, thereby improving overall quality and performance. At the same time, smart hotels are able to fully meet guests' personalized service needs and, on the basis of higher customer satisfaction, deliver superior service offerings and hotel products. Moreover, management and operations can gradually become "smart," as networked information technologies are used to build digital management platforms that effectively promote innovation in service quality and operating models [1].

In terms of smart-hotel operations and development, the most critical link is the organic integration of network communications and information technologies with service and management functions. This enables a shift from the traditional, passive service model to a proactive service approach, while also allowing for deep insight into guests' needs. On this basis, hotels can develop intelligent service solutions that enhance service quality and standards and, in turn, provide guests with higher-quality types of hotel services [2].

2. Consumer needs in the digital era

2.1. Core demands of the digital-native cohort

As a key consumer segment raised in an internet environment, digital natives have shifted from valuing standalone product functions to pursuing more composite value dimensions, most notably a deep emphasis on personalization, experience, and social connection. For instance:

(1) Personalization has become a rigid demand for self-expression. In an age of information overload, homogeneous, standardized offerings cannot satisfy their desire to showcase distinctive taste and affirm identity. They actively seek, and even co-create personalized products and services that resonate emotionally, moving from "one-size-fits-all" to "one person, many faces";

(2) Experiential value outweighs the product per se. What they purchase is not merely ownership of a good, but the immersion and delight throughout the consumption journey. Whether through convenient and engaging online interactions, design-forward offline retail scenarios, or the emotional bonds formed via brand narratives, a high-quality, end-to-end experience itself constitutes a primary consumption motive [3];

(3) Social attributes are deeply embedded across the consumption chain. Consumption functions as social currency: from "check-in" sharing on social media to gain community recognition, to buying the same items to connect with interest groups, decision-making, the purchasing process, and post-purchase outcomes are all infused with intensive social interaction and value sharing. These three elements intertwine to form a new standard by which digital natives assess brand value, propelling the market's evolution from transactional to relationship-oriented engagement [4].

2.2. New decision pathways and key experience touchpoints for smart-hotel guests

2.2.1. Socially driven, circular decision pathway

Contemporary hotel choices have shifted from a traditional linear process to a dynamic, social-media-driven loop. The starting point is often an incidental "seeding" on content platforms: a short video showcasing a hotel's

distinctive ambience or immersive experience first triggers emotional resonance and purchase intent. Users then turn to platforms to verify authenticity through real reviews, where others' first-hand experiences become decisive evidence. During booking, guests not only compare prices but also look for exclusive packages on official channels and evaluate mobile-channel convenience [5]. Post-stay social sharing completes the loop, by posting geo-tagged reviews, guests achieve self-expression and, in turn, generate new content that continuously influences subsequent potential customers, forming an ever-cycling decision ecosystem.

2.2.2. Key touchpoints in a seamless end-to-end journey

A smart hotel's competitiveness lies in the meticulous refinement of every digital and physical touchpoint across the guest journey. Before arrival, confirmation messages that capture customized requests convey immediate personalized care. At check-in, a frictionless, "zero-contact" process establishes a first impression of efficiency and technological sophistication. The in-room experience is pivotal via a smartphone or smart panel, guests can control the environment with one touch and switch among various scene mode. This high degree of autonomy delivers substantial convenience and satisfaction. Intelligent assistants that proactively respond to needs and offer service recommendations further elevate delivery to considerate, anticipatory care. Finally, streamlined check-out and subsequent personalized follow-ups convert a one-time transaction into a long-term relationship, culminating in an end-to-end experience that rises from functional fulfillment to emotional connection.

3. Opportunities and challenges for smart-hotel marketing in the digital era

3.1. Opportunities for smart-hotel marketing in the digital era

3.1.1 Data-driven precision reach and personalized supply

Smart hotels can compliantly integrate first-party data from membership systems, lead capture on official websites and mini-programs, OTA bookings, and on-property spending to build actionable audience profiles and scenario tags [6]. This enables differentiated content and pricing strategies across touchpoints. For example, for micro-segments such as "weekend family," "weekday business," and "local short stay," hotels can push tailored bundles, matching room types, breakfast with late check-out, or meeting rooms with airport transfers, respectively. Around public holidays, A/B testing can be used to optimize copy, landing pages, and voucher structures. Clear unsubscribe options and privacy notices across SMS, email, and social platforms help reduce user aversion. Iterating media placements and product bundling based on real behavioral data can raise direct-booking conversion, shorten decision pathways, and steadily reduce reliance on intermediary channels and overall customer acquisition costs.

3.1.2. Conversion opportunities enabled by omnichannel direct connectivity and a service closed loop

Digital tools integrate the entire journey from "awareness, booking, stay, repeat purchase" into a unified flow. After conducting an initial screening on search engines, maps, and review platforms, users can click through directly to the hotel's official website or mini-program to view real-time availability, select rooms online, complete payment, and receive e-invoices. Upon arrival, guests can check in via a digital key or kiosk, while intelligent customer service assists with extra beds, additional bedding, and late check-out. After departure, points, e-invoices, and preference-collection surveys are pushed automatically [7]. Marketing and service are no longer siloed, where front-end campaigns can be accurately attributed to orders and repeat purchases, and back-end service experiences feed back into word-of-mouth and ratings, creating a positive flywheel. For hotels, this closed loop allows continuous

monitoring and optimization of key metrics such as conversion rate, repurchase rate, and complaint rate, thereby informing the pacing of future campaigns, the design of member benefits, and budget allocation.

3.1.3. Unlocking incremental demand through content-local ecosystem synergy

Given that short videos, livestreaming, and local-life platforms have become normalized in consumption decisions, smart hotels can incorporate "content production, reputation management, local collaboration" into day-to-day marketing. On one hand, they can establish stable UGC incentives and a creative asset library to encourage guests, under lawful and compliant conditions to share room types, views, and dining experiences; the official hotel account should respond promptly to reviews, aggregate FAQs, and optimize information displays [8]. On the other hand, hotels can coordinate with nearby restaurants, attractions, exhibitions, and sports/entertainment events to launch verifiable, fulfillable co-branded packages and interchangeable entitlements, and set limited pre-sales and dynamic-pricing windows ahead of major events and trade-show periods to match guests with different budgets and lengths of stay. By presenting authentic content, usable benefits, and clear after-sales rules on a single page, hotels can both raise conversion efficiency and strengthen their destination attributes and average length of stay, thereby creating room for off-peak marketing and long-term brand asset accumulation [9].

3.2. Challenges facing smart-hotel marketing in the digital era

3.2.1. Data silos and privacy concerns impeding the deepening of precision marketing

Although data-driven approaches present a core opportunity, data within hotels is often fragmented, forming hard-to-bridge "silos." Property management systems (PMS), membership/loyalty systems, front-desk records, and data from online channels are typically stored separately, with no unified data hub for integration and cleansing. As a result, marketers are unable to build a 360-degree single customer view, which undermines the depth and accuracy of precision marketing. For example, a guest's booking preferences on an OTA may not be effectively captured by the hotel's CRM, leading to gaps in the personalized services the guest should receive as a member. Meanwhile, as global data-privacy regulations tighten and consumer privacy awareness grows, hotels face unprecedented compliance pressure when collecting and using user data [10]. Over-collection or improper use not only creates legal risks but also severely damages brand trust [11]. Therefore, the primary challenge is how to, within a lawful and compliant framework, selectively dismantle data barriers and enable deep, yet non-intrusive, personalized interactions [12].

3.2.2. The challenge of balancing technology investment and input-output efficiency

The technological infrastructure underpinning smart-hotel marketing, such as intelligent room-control systems, CRM platforms, data middle platforms, and various software subscriptions, requires substantial upfront capital outlays as well as ongoing maintenance and upgrade expenses. For many properties, particularly small and independent hotels, these investments constitute a significant financial burden. Compounding the challenge, the payback period on technology spending is often lengthy and difficult to quantify with precision. An expensive smart system may merely confer a sense of "technological sophistication" for marketing purposes without materially lifting room rates or meaningfully increasing occupancy, leading to underwhelming returns on investment. Moreover, technology iterates rapidly, where applications that are considered cutting-edge today may become industry standard within one or two years, placing hotels in a dilemma. They might fail to invest and risk falling behind or invest and face accelerated depreciation risk. Consequently, within constrained budgets, managers

must carefully prioritize technology initiatives that genuinely create customer value and produce measurable revenue gains, while avoiding the pitfall of blindly pursuing flashy "black-tech" novelties.

3.2.3. The risk of imbalance between technology application and human-centered service

The core of smart-hotel marketing is to deliver an exceptional experience; however, excessive reliance on technology can rigidify service processes and strip away emotional warmth, prompting customer dissatisfaction. When a hotel channels substantial resources into hardware upgrades, it can easily neglect training and empowering frontline staff. For example, if a complex self check-in kiosk malfunctions and no staff member promptly assists, or if every guest request must be routed through an impersonal voice assistant with no clear path to a human response, frustration quickly mounts. Many negative reviews do not target the technologies per se but arise from the absence of effective human remediation when systems fail. This "technology-first" orientation can render services standardized yet lacking in flexibility, making it difficult to accommodate guests' individualized and emergent needs. Ultimately, if the "convenience" and "intelligence" promised in marketing are experienced as "hassle" and "indifference," reputational backlash is inevitable. Therefore, the strategic imperative is to ensure that technology functions as an enabling tool, supporting warmer, more agile, and humanized care rather than supplanting it, an equilibrium that smart hotels must continually pursue across marketing and operations.

4. Building and applying innovative smart-hotel marketing models in the digital era

4.1. Data-driven: Building a 360-degree customer view to enable precision reach

The foundation of innovative marketing lies in dismantling internal data silos and establishing a unified, 360-degree customer view. Hotels should integrate data from property/room management, loyalty programs, and all distribution/booking channels to form continuously updated, end-to-end customer profiles. These profiles capture guests' historical preferences, spending habits, and behavioral patterns, providing a robust basis for precision marketing. On this basis, campaigns can be highly automated and hyper-personalized: systems can automatically identify segment-specific needs, pushing fast-track, express-service bundles to business travelers, while tailoring family packages that include entertainment options for parents and children. Such insight-driven, individualized engagement dramatically improves marketing efficiency and the guest experience, transforming marketing from a cost outlay into a core engine that directly drives revenue growth.

Beyond integration, operational excellence hinges on a clear data-governance framework (ownership, quality controls, consent management) and privacy-by-design processes to ensure compliant, trusted activation. A customer data platform can orchestrate real-time decisioning across web, app, email, and on-property touchpoints, while experimentation (A/B and multivariate tests) and incrementality measurement validate causal lift rather than vanity metrics. Segmentation should evolve from static rules to propensity and customer-lifetime-value models, enabling bid optimization, amenity bundling, and churn-prevention triggers [13]. Feedback loops that links campaign exposure to bookings, ancillary spend, and post-stay NPS continuously retrain audiences and creatives, compounding performance over time and turning the 360-degree view into a durable, revenue-generating asset.

4.2. Content innovation: Centering scenario-based experiences to accumulate social assets

Smart-hotel marketing must upgrade its content strategy, shifting from functional promotion to the creation of immersive, scenario-based experiences. Hotels should systematically plan social-platform content and, through short videos and multimedia posts, vividly demonstrate how technologies, such as intelligent room controls and

contactless check-in, tangibly elevate the quality of stay. The key is to translate technological advantages into a perceivable lifestyle aesthetic that sparks user resonance and aspiration. At the same time, hotels need to establish effective mechanisms that encourage guests to share authentic stay experiences and to manage these user-generated materials as valuable digital assets through aggregation and curation. This approach not only acquires customers efficiently within public traffic pools, but also, by building a corpus of genuine word-of-mouth, continuously strengthens brand trust and forges a robust private-traffic moat.

4.3. Experience reengineering: Full-touchpoint optimization for service-led marketing

The higher-order approach to innovation is to embed marketing logic across the entire customer journey, thereby achieving experience-driven, service-led marketing. This requires meticulous design and management of every stage, pre-stay booking, in-stay experience, and post-stay repurchase. Before arrival, official channels must offer a frictionless flow while intelligently recommending services that match guest needs [14]. During the stay, smart systems should automatically reinstate a guest's preferred settings to create the surprise of "being understood," while ensuring that warm human assistance promptly steps in when technology falters. After departure, personalized follow-ups and targeted invitations grounded in that stay's data are essential. By establishing a "monitor-optimize-validate" closed loop in experience management, hotels can turn superior guest experience itself into the most powerful and sustainable vehicle for marketing.

4.4. Ecosystem synergy: Integrating diverse scenarios to expand the value frontier

Innovation in smart-hotel marketing is not confined to internal process optimization; more importantly, it entails proactively breaking industry boundaries to build an open, win–win local-lifestyle ecosystem. Hotels can move beyond the traditional accommodation framework by forging deep partnerships with high-quality neighborhood businesses, cultural venues, tourist attractions, and local service platforms to co-create "accommodation-plus" composite experience products. For example, they might collaborate with renowned art museums to launch "art journey" packages with exclusive exhibition access, co-design limited culinary-stay offerings with Michelin-starred restaurants, or develop urban exploration activities with outdoor brands [15]. Through resource exchange and traffic sharing, such cross-sector collaborations substantially enrich the hotel's product connotation and appeal. For consumers, they deliver value-added, one-stop experiences; for hotels, they not only lift average transaction value and brand allure but also leverage partners' channels to reach prospective audiences that traditional marketing struggles to cover, enabling a strategic shift from a pure lodging provider to a regional lifestyle advocate.

5. Conclusion

The digital era has reshaped the competitive logic of the hotel industry, and innovation in smart-hotel marketing models has become the core pathway for responding to market shifts. By building data-driven precision-reach systems, executing social operations that balance content and experience, optimizing service touchpoints across the end-to-end journey, and proactively expanding cross-sector ecosystem value, hotels can elevate the guest experience while achieving sustainable growth. Looking ahead, competition among smart hotels will transcend technology per se and pivot toward an integrated capability stack-customer-centric at its core, technology-enabled, and ecosystem-extended. Only through continuous exploration and iteration within digital transformation can firms establish differentiated advantages amid intense market competition and realize long-term value.

Disclosure statement

The authors declare no conflict of interest.

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