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Smart Tourism Policy Innovation In Pekanbaru: Integrating Urban Destinations and Local Revenue Governance

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Abstract:
Rapid digitalization has transformed how urban tourists access destinations, public services, and local enterprises, although the fiscal consequences of municipal smart tourism platforms remain insufficiently understood. This study analyzes Pekanbaru's tourism policy architecture and develops an integrated governance framework linking digital tourism services to measurable local own-source revenue (PAD). Employing a qualitative documentary case study, the analysis draws on Pekanbaru's 2021–2036 tourism master plan, the SIPAMAN public portal, official tourism statistics, Indonesian fiscal regulations, data protection legislation, and contemporary academic literature. Official records indicate 2,254,582 domestic visits to tourist attractions in 2024, whereas municipal statistics documented 836,827 domestic and international visits during January–April 2026, representing periods that cannot be directly compared. Findings demonstrate that SIPAMAN primarily functions as an information gateway, while existing documentation provides insufficient evidence of interoperable transactions or attributable fiscal contributions. The proposed framework incorporates five interrelated components: reliable destination information, integrated tourism services, evidence-based administrative management, digital tourism promotion, and inclusive connections with local enterprises. Furthermore, the study differentiates platform outputs, tourism and business outcomes, and legally attributable fiscal receipts through an evaluation matrix, clearly defined institutional responsibilities, and phased implementation arrangements. Its principal contribution lies in establishing a context-sensitive and auditable governance design rather than demonstrating causal improvements in PAD. Subsequent evaluations require integrated platform analytics, tourist expenditure data, business transaction records, disaggregated fiscal information, and appropriate comparative analytical methods.

Keyword: Smart Tourism, Tourism Governance, Policy Innovation, Local Revenue

INTRODUCTION

Tourism increasingly operates as an interconnected service economy rather than a discrete set of attractions. This has implications for municipal policy: information

provision, transport, accommodation, cultural experiences, taxation, and business capabilities must be considered together. Contemporary destination research identifies governance, accessibility, innovation, sustainability, and technology as complementary dimensions rather than interchangeable synonyms for smartness (Cerdá-Mansilla et al., 2024; Moliner Tena et al., 2024).

The development of tourism has increasingly become an important component of urban economic development. Tourism is no longer limited to the management of conventional tourist attractions but has developed into a complex economic ecosystem involving accommodation, culinary businesses, transportation, creative industries, entertainment, cultural activities, digital platforms, and various supporting services. Tourism development is closely connected with planning, destination management, information technology, and the interaction of different tourism stakeholders (OECD, 2024). In an urban context, tourism development therefore requires policies capable of connecting different actors and resources within an integrated system.

Smart Tourism can be understood as the development of tourism supported by digital technology and data to create more integrated, accessible, responsive, and personalized tourism experiences. Gursoy et al. (2024) explain that Smart Tourism is closely related to technological infrastructure, information, data, and connectivity in developing tourism ecosystems. Similarly, Sustacha et al. (2023) argue that smart tourism destinations utilize technological capabilities to enhance tourism experiences through personalization and the integration of destination services. In this context, technology is not merely used as a promotional instrument but can become part of the governance mechanism of tourism destinations.

The development of Smart Tourism is particularly relevant for urban destinations because cities have diverse tourism resources but also face complex management challenges. Urban tourism involves different types of destinations and activities, including cultural tourism, culinary tourism, shopping, events, heritage, religious tourism, entertainment, and business-related travel. Such diversity requires integrated destination planning and coordination among tourism stakeholders (OECD, 2024). The Smart Tourism approach provides an opportunity to connect these resources through digital infrastructure, data, and collaborative governance (Gursoy et al., 2024; Xu et al., 2024).

The magnitude of tourist visits demonstrates that tourism activity in Pekanbaru has economic potential that can be developed further. However, the number of visits alone does not automatically translate into an optimal contribution to local own-source revenue (PAD). Tourism's economic impact is influenced by tourist spending, duration of stay, the use of accommodation and other tourism services, business activity, and the effectiveness of destination management (OECD, 2024). Therefore, tourism policy needs to consider not only the quantity of visitors but also the economic value generated by tourism activities.

The Pekanbaru City Government has already established an important regulatory foundation through Regional Regulation Number 1 of 2021 concerning the Regional Tourism Development Master Plan. The regulation provides a formal policy framework for tourism development in Pekanbaru (Pemerintah Kota Pekanbaru, 2021). In addition, the Pekanbaru City Culture and Tourism Office has developed SIPAMAN, or Sistem Informasi Pariwisata Akuntabel Modern Andal Nyaman, as a digital tourism information system.

The official SIPAMAN platform describes Smart Tourism as one of the components of the city's Smart City development (Pemerintah Kota Pekanbaru, 2026b).

The unresolved policy question is not whether SIPAMAN exists, but whether institutions can transform an information-oriented portal into a collaborative service and learning infrastructure. Research on destination management organizations reports that shared digital platforms require trust, leadership, incentives for participation, and knowledge exchange; a government-operated website by itself does not establish those conditions (Zainal-Abidin et al., 2023; Xu et al., 2024). The existence of SIPAMAN indicates that the digitalization of tourism has already become part of Pekanbaru's policy environment. Nevertheless, the existence of a digital information platform should be distinguished from the development of a comprehensive Smart Tourism ecosystem. Smart Tourism requires integration between information systems, destination management, tourism businesses, government data, digital promotion, visitor experience, and economic transactions (Gursoy et al., 2024; Xu et al., 2024).

The importance of this issue is strengthened by the continuing development of digital public services. The official SIPAMAN platform contains tourism information and tourism-related publications and functions as a digital tourism information platform for Pekanbaru (Pemerintah Kota Pekanbaru, 2026b). The platform therefore provides an initial infrastructure that can be further developed into an integrated Smart Tourism policy instrument.

Based on this background, the central issue of this research concerns the policy model of Smart Tourism that can be developed by the Pekanbaru City Government to support urban tourism development and strengthen the potential contribution of tourism to PAD. The research question is formulated as follows: What Smart Tourism policy innovation model can be developed by the Pekanbaru City Government to support urban tourism development and increase local own-source revenue (PAD)? The objective of this study is to formulate an analytical model of Smart Tourism policy innovation that integrates digital technology, tourism governance, destination development, tourism promotion, community and business participation, and local economic development.

RESEARCH METHOD

This study applies qualitative documentary policy analysis to Pekanbaru's smart-tourism governance, with the public digital platform and municipal tourism-policy architecture as its embedded case. Its unit of analysis is the relationship among policies, digital service functions, institutions, visitor records, and potential local fiscal outcomes. This is an analytical reconstruction from publicly accessible records; it is not presented as a field evaluation of actual tourist behavior or as a causal impact study. The evidence window is January 2021 to October 2026, allowing the analysis to trace the binding 2021 regional tourism master plan and later, independently dated institutional and statistical materials. The 2021 regulation is deliberately retained despite the literature-update window because it remains the legal foundation of the case. Peer-reviewed theoretical literature was updated primarily from 2022 to 2026; sources were selected for their relevance to smart destinations, digital government, platform governance, tourism inclusion, destination performance, and ethical data use (Gursoy et al., 2024; Moliner-Tena et al., 2026; Gutierriz et al., 2025). The documentary corpus comprises: (a) Pekanbaru Regulation No. 1/2021 on the 2021–2036 tourism master plan; (b) Statistics

Indonesia's Pekanbaru in Figures 2025 and related domestic tourism statistical definitions; (c) the publicly observable SIPAMAN web portal and its destination-information categories; (d) dated municipal releases concerning visitor counts and local tax collection; and (e) national statutes and implementing regulations governing regional revenue and personal data. Inclusion required a traceable issuing body, publication date or legal identifier, relevance to the stated question, and a verifiable source link. Duplicate news accounts and unsupported promotional estimates were not treated as independent outcomes.

Analysis proceeded through document identification, source appraisal, structured extraction, thematic coding, and inferential synthesis. The coding matrix distinguished five domains: information visibility, service interconnection, government data use, digital destination marketing, and local business integration. A separate evidence-status code identified confirmed facts, plausible policy mechanisms, unverified functionality, and recommendations. Comparisons across sources were used to identify agreement and contradiction. The model is therefore a normative, context-specific design derived from documentary evidence, rather than a tested intervention (Braun & Clarke, 2022; Gozgor et al., 2024).

Credibility was pursued through triangulation of statistical publications, official municipal notices, legal texts, and SIPAMAN's visible interface. The official 2024 domestic-arrival total was checked against the monthly figures in the statistical table; the sum is 2,254,582. A separate government release reports 520 international visits in 2024, producing an all-origin total of 2,255,102. These are administratively recorded visits, not verified unique persons. The 2026 January–April series is kept distinct from the full-year 2024 figure to prevent false year-on-year comparisons (Badan Pusat Statistik Kota Pekanbaru, 2025; Pemerintah Kota Pekanbaru, 2025a, 2026a).

No interviews, enterprise transaction records, platform analytics, individual-level expenditure data, or audited tourism-attributable PAD ledgers were available in the documentary corpus. Consequently, this study does not estimate treatment effects, visitor spending multipliers, or incremental fiscal receipts. The proposed indicators and implementation stages are prospective evaluation instruments. Source limitations and inference boundaries are reported explicitly so that future primary-data studies can test the model without confusing design propositions with observed impacts (OECD, 2024; Zainal-Abidin et al., 2023).

RESULTS AND DISCUSSION

1. Tourism Development Potential in Pekanbaru

Pekanbaru's tourism economy combines cultural sites, culinary businesses, shopping, accommodation, events, and other urban services. Official statistics report 2,254,582 domestic tourist visits to attractions in 2024, with monthly counts ranging from 133,263 in March to 225,876 in June (Badan Pusat Statistik Kota Pekanbaru, 2025). These figures establish the scale of recorded destination activity but should not be interpreted as the number of distinct people visiting the city. Variation between months suggests a need for more responsive destination planning, although the available series alone cannot establish its causes. Monthly counts can guide decisions about visitor information, seasonal promotion, site maintenance, and coordination with businesses. They cannot independently reveal tourist expenditure, average length of stay,

participation in digital services, or the proportion of activity entering the formal tax system. These dimensions require separately defined indicators.

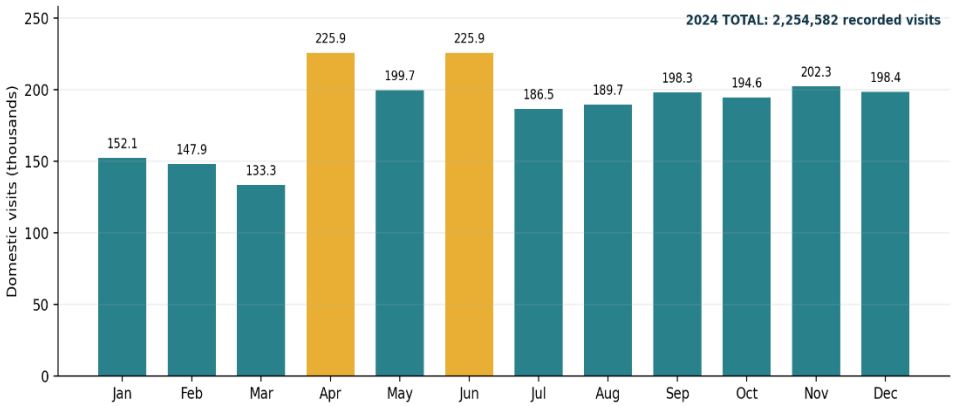


Figure 1. Monthly domestic tourist visits to Pekanbaru attractions in 2024
Source: Author. 2026

For municipal policy, the central question is therefore how tourism demand connects with local services and, under applicable fiscal rules, public revenue. Digital information may direct visitors toward hotels, restaurants, transportation, and creative enterprises, yet the financial effect depends on actual transactions and administrative compliance. The distinction between visits, economic activity, and realized PAD prevents an unsupported causal claim while identifying the evidence that subsequent evaluations must collect (OECD, 2024).

2. Institutional and Digital Foundations

Pekanbaru's regional tourism master plan, established through Municipal Regulation No. 1 of 2021, provides an institutional basis for destination development. The publicly accessible SIPAMAN portal represents a further digital initiative connected with the city's smart-tourism agenda (Pemerintah Kota Pekanbaru, 2021, 2026b). Their coexistence creates an opportunity to align planning, information management, and service coordination, but formal policy authorization should be distinguished from demonstrated system performance.

Table 1. Evidence inventory and boundaries of inference

Evidence domain	Documented observation	Interpretation constraint
Local planning authority	Municipal Regulation No. 1/2021, tourism master plan 2021–2036	Confirmed legal framework; not proof of platform impact
2024 domestic visit records	2,254,582 visits (annual sum; BPS Table 7.6)	Counts visits, not unique visitors or revenue
2024 international visits	520 international visits, reported municipally	Different category from BPS domestic series
January–April 2026 visits	836,593 domestic; 234 international; 836,827 total	Partial-year record, not an annual comparison
SIPAMAN public interface	Tourism, accommodation, restaurant and other information categories	Observable content portal

Evidence domain	Documented observation	Interpretation constraint
Tourism-related PAD	Legal PBJT framework and municipal tax update available	No audited SIPAMAN-attributable PAD series in sources

Source: Author. 2026

The documentary inventory in Table 1 separates what official sources establish from what they cannot verify. For instance, the 2024 domestic series concerns recorded visits; the municipality's January–April 2026 notice reports 836,827 visits, including 836,593 domestic and 234 international visits (Pemerintah Kota Pekanbaru, 2026a). Neither record establishes individual-level expenditure or revenue attributable to SIPAMAN, and the partial-year figure is not a like-for-like annual comparison. The portal publicly presents categories for attractions, accommodation, restaurants, travel-related services, and additional urban facilities. This is evidence of a destination-information interface, not proof of live reservations, integrated payment settlement, or interoperable administrative databases. Smart Tourism consequently requires institutional decisions about which agency manages each dataset, how updates are verified, and which functions can lawfully connect across public offices and private service providers (Gursoy et al., 2024; Xu et al., 2024

3. Smart Tourism as Public Policy Innovation

Policy innovation in this setting concerns the reorganization of public responsibilities, service interactions, and evidence use, rather than the mere introduction of a website. Smart-destination research treats technology as part of an ecosystem involving visitors, firms, institutions, and destination resources (Gursoy et al., 2024; Sustacha et al., 2023). In Pekanbaru, innovation would be demonstrated by coordinated administration and reliable services, not by the number of functions described in a development proposal.

A critical distinction is necessary between current SIPAMAN visibility and proposed future integration. The existing interface makes several service categories observable, but technical interoperability, booking completion, data sharing, and transaction processing have not been independently verified from the documentary corpus. Treating those capabilities as planned options preserves the analytical boundary between an existing policy resource and an implementation scenario, while allowing the government to define measurable development priorities.

The study proposes that the distinctive contribution of Pekanbaru's model lies in its fiscal-accountability orientation. Rather than assuming that a smarter destination automatically generates additional income, the model specifies separate stages for accessible information, service use, enterprise transactions, and legally reportable revenue. This contextual approach connects smart-tourism literature with municipal public-finance responsibilities and creates policy propositions that can later be tested using independently sourced records (Gozgor et al., 2024).

4. A Context-Sensitive Smart Tourism Policy Model

The proposed architecture includes digital destination information, integrated visitor services, evidence-based tourism governance, digital promotion, and

connections with local enterprises. These five elements should operate as mutually informing functions instead of a rigid technological sequence. Their organization reflects contemporary evidence on smart-destination ecosystems while adapting the framework to the administrative and fiscal responsibilities relevant to Pekanbaru (Gursoy et al., 2024; Fatma & Bhatt, 2026).

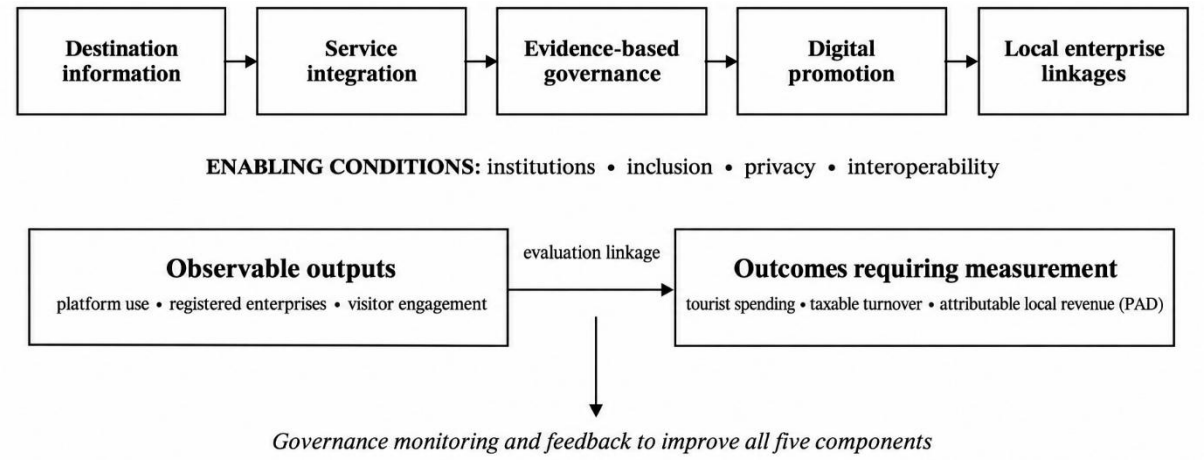


Figure 2. Integrated policy architecture and conditional fiscal-outcome pathway
Source: Author. 2026

Figure 2 presents the model as two connected analytical layers. The service layer concerns accurate information, accessible interfaces, enterprise participation, and accountable data management. The outcome layer distinguishes observable engagement and business transactions from any subsequent contribution to legally defined regional taxes or levies. Feedback from citizens, businesses, and officials must circulate between these layers so that operational findings inform policy adjustment rather than merely reporting platform traffic. This model remains a proposal derived from documents and the research literature, not an estimate of causal impact. Its practical value depends on the availability of baseline measures, assigned institutional responsibilities, and defensible evaluation criteria. In particular, improvements in tourist satisfaction or online visibility must be reported separately from financial outcomes, which require verified expenditure and fiscal data. The subsequent subsections specify how each component could be operationalized.

a. Digital Destination Information; The information component should present reliable descriptions of destinations, cultural heritage, culinary activities, accommodation, public transportation, events, shopping opportunities, and local creative products. Practical visitor guidance also requires routes, opening hours, admission conditions, accessibility information, and channels for submitting feedback. Bringing these elements together can reduce the costs of searching across multiple sources, provided users can identify the currency and authority of each record (Sustacha et al., 2023). Information quality is an administrative obligation rather than simply a publishing task. Each participating organization should designate a record custodian and document when information was last checked, how corrections are submitted, and how inaccurate listings are resolved. Studies of tourism information and artificial intelligence underline the importance of reliability and trust when travelers make

decisions through digital channels (Dong et al., 2026; Won & Lee, 2026). SIPAMAN offers an existing location from which a verified destination directory could develop, avoiding the presumption that another application must be commissioned. Before expanding content, however, the municipality should audit incomplete entries, duplication, accessibility barriers, and maintenance capacity. Printed or assisted information remains relevant for people with limited connectivity or digital skills, ensuring that a tourism information policy does not exclude less digitally connected residents or visitors (Yao et al., 2025).

b. Integrated Tourism Services; Integrated services should help visitors move from discovering a destination to finding appropriate transport, accommodation, food, events, and locally available assistance. A coherent interface may link trustworthy provider directories, accessible maps, contact information, and clearly identified service channels. The objective is to minimize fragmented decisions rather than to concentrate every commercial transaction in a government application, particularly where private providers already offer established services (Sustacha et al., 2023). Integration needs to be specified at several different levels. A shared directory and consistent destination identifiers are feasible preliminary arrangements, while reservations, ticketing, payments, and interoperable case management require separate technical tests and lawful agreements. The documentary evidence does not demonstrate that SIPAMAN currently supports these advanced functions. Accordingly, any assessment should distinguish operating features, links to external providers, pilot functions, and future proposals (Esper et al., 2025). Service quality should be evaluated through practical journeys rather than platform appearance. Evaluation questions include whether users can locate a destination, verify opening details, contact an operator, complete an intended service, and obtain help when information is wrong. Measures of successful referrals and resolved inquiries would be more informative than raw application downloads, while privacy and accessibility checks should accompany each stage of technical expansion (Cerdá-Mansilla et al., 2024).

c. Evidence-Based Tourism Governance; Tourism data governance requires an agreed account of what information is collected, by whom, and for which decisions. Relevant indicators include patterns of visits, destination popularity, seasonality, accommodation demand, event responses, digital engagement, geographic distribution of businesses, service utilization, and potential economic activity. These categories provide complementary views of destination performance, but inconsistent definitions across agencies can make apparently similar indicators unsuitable for direct comparison (Xu et al., 2024). The municipality could establish a common indicator dictionary and designate agencies responsible for validating each dataset. The tourism office may lead destination records, while statistical agencies provide published visitor measures and revenue authorities retain responsibility for legally classified tax information. Data-sharing arrangements must specify permissible purposes, update schedules, access permissions, and the level of aggregation. Such arrangements are prerequisites for analytical integrity rather than optional technical refinements (Republic of Indonesia, 2022b). An administrative dashboard could report verified destination coverage, update timeliness, visitor feedback, service access, and aggregated enterprise participation. Its design should

also reveal coverage gaps among smaller or less digitally connected businesses. Dashboard indicators are aids to policy decisions, not substitutes for independent evaluation; reported correlations between online activity and tourism revenue must not be treated as causal evidence without suitable comparison data and fiscal verification (Gozgor et al., 2024).

d. Digital Promotion and Marketing; Digital promotion should present Pekanbaru as an interconnected urban experience rather than advertise isolated attractions. Official channels can help prospective travelers discover cultural sites, culinary areas, markets, local festivals, and small creative businesses alongside accommodation and transportation options. The content strategy should distinguish audiences such as family, business, event, and leisure visitors, since the information needed to extend a visit differs across these groups (Gutierriz et al., 2025). A destination calendar coordinated with event organizers and local enterprises could distribute attention across a wider range of places and time periods. Tourism businesses should be able to verify their information and participate through transparent criteria, while communications should avoid privileging only firms with established advertising capacity. Digital collaboration has potential value when destinations align stakeholder messages, maintain consistent listings, and provide practical reasons for visitors to explore additional services (Zainal-Abidin et al., 2023). Promotional performance requires a careful distinction between reach and results. Page impressions, search visibility, referral clicks, and engagement can indicate communication outputs, whereas verified inquiries, completed bookings, and tourist expenditure are closer to economic outcomes. Even a rise in transactions does not independently prove an increase in PAD. The evaluation should compare campaigns over time while considering seasonal travel, market conditions, and other sources of tourism demand (OECD, 2024).

e. Links with the Local Economic Ecosystem; The economic component begins with participation by accommodation providers, restaurants, transport operators, cultural organizations, and micro, small, and medium enterprises. These actors connect visitor interest with actual services and purchases. Digital listings should therefore be designed as pathways to local economic participation rather than as a catalogue of attractions alone. Any contribution to municipal revenue depends on the character and legal classification of resulting transactions (Republic of Indonesia, 2022a). Enterprise onboarding requires more than invitations to register. The municipality and business associations could offer practical assistance with verified listings, accessible descriptions, customer communication, and maintenance of current information. Participation standards should remain feasible for smaller businesses and recognize that uneven digital literacy can reproduce existing commercial inequalities. Research on platform participation suggests that organizational capacity affects the benefits firms can obtain from digital environments (Mao et al., 2024). The relationship between business activity and local finance must nevertheless be treated conditionally. A visitor's purchase is not equivalent to a tax receipt, and some benefits accrue to enterprises without creating a directly identifiable regional revenue item. Tourism and revenue agencies should separately monitor participation, formal transactions, taxable categories, and realized

collections. This separation also helps avoid overstating the benefits of platform development in public communications (Republic of Indonesia, 2023).

5. Interpreting Smart Tourism and PAD

The proposed fiscal mechanism begins when accurate digital information supports visitor engagement and access to destinations or services. Some of those interactions may lead to purchases, increased turnover, or additional formal business activity. Only a subset can enter legally defined municipal revenue categories, depending on taxable activities, compliance, and administration. The pathway therefore describes a conditional series of mechanisms rather than evidence that SIPAMAN has already increased Pekanbaru's PAD (OECD, 2024).

Indonesia's Law No. 1 of 2022 and Government Regulation No. 35 of 2023 govern relevant local taxes and levies, including the applicable framework for taxes on certain goods and services (Republic of Indonesia, 2022a, 2023). Municipal tax collection reports can describe overall administrative performance, but aggregate receipts should not be attributed to tourism or to one application without a defensible classification. The documentary sources provide no audited SIPAMAN-attributable revenue series.

A future evaluation should establish pre-intervention observations, define eligible fiscal categories, and measure service use, visitor expenditure, enterprise activity, and official receipts independently. Comparable destinations or participating and nonparticipating firms could provide useful benchmarks, subject to data access and appropriate research design. Interpretation must account for seasonality, economic trends, tax-policy changes, and other factors that influence revenue. The resulting estimates should report uncertainty rather than present expected fiscal benefits as confirmed findings.

6. SIPAMAN Capability and Evaluation

SIPAMAN may be evaluated through four progressively demanding capabilities: information, interaction, transaction, and intelligence. The information capability concerns accurate listings and services; interaction concerns inquiries, feedback, and communication with providers. Transaction capability would involve verified links or processes for bookings, ticketing, and related activities where feasible. Intelligence concerns legally authorized aggregation and analysis to support planning, maintenance, promotion, and policy evaluation (Celdrán-Bernabeu et al., 2026).

These capabilities describe an assessment framework rather than a verified inventory of existing functions. Available public pages establish that SIPAMAN presents tourism information, but they do not substantiate live transaction processing, cross-agency data synchronization, or advanced analytics. An independent functional audit should document successful user tasks, update intervals, accessibility, data protections, partner agreements, uptime, and support procedures before any particular level is recorded as operational (Pemerintah Kota Pekanbaru, 2026b).

A staged capability assessment would guide investment decisions by identifying feasible improvements to current services before more complex infrastructure is proposed. For example, correcting destination listings and enabling reliable inquiries may offer more immediate public value than deploying untested personalization features. Subsequent decisions should compare implementation cost with verified user

outcomes and institutional capacity, while keeping consumer information and government fiscal records within their appropriate legal boundaries (Cerdá-Mansilla et al., 2024).

7. Stakeholder Collaboration and Accountability

Smart Tourism requires cooperation among public agencies, tourism operators, technology providers, residents, and visitors. Their responsibilities are complementary but not interchangeable: the tourism office coordinates destination information, revenue authorities administer fiscal classifications, and information-system custodians manage lawful access and technical safeguards. Businesses supply service details and market participation, while communities and tourists can identify errors, accessibility needs, and effects on the visitor experience (Gursoy et al., 2024).

Table 2. Stakeholder Mandates, Prospective Responsibilities, and Metrics

Actor	Proposed public-governance responsibility	Evaluation evidence
Tourism office	Standards, destination registry, business outreach	Coverage, dated updates, visitor complaints
Revenue authority	Tax classification, audited aggregate PBJT reporting	Verified receipts, tax-base changes, compliance
Data/ICT custodians	Interoperability, consent, security, open-data controls	Interface uptime, breaches, record quality
Businesses and MSMEs	Listings, service quality, formal transaction channels	Active firms, verified service interactions
Visitors and communities	Accessibility feedback, cultural representation	Satisfaction, inclusion, grievance resolution

Source: Author, 2026

Table 2 these relationships into proposed responsibilities and monitoring evidence. The assignments are an analytical implementation design, not a claim that Pekanbaru has formally adopted every arrangement. An interagency coordination mechanism should clarify who approves data publication, resolves competing records, responds to complaints, and authorizes the exchange of restricted information. Explicit accountability reduces the risk of treating collaboration as an informal expectation without an operational decision process. Collaboration also needs practical participation rules. Small businesses should have transparent registration procedures, residents should be able to challenge inaccurate cultural representations, and users require accessible complaint channels. Procurement and partnership arrangements must prevent technology suppliers from defining public priorities without oversight. Recent smart-tourism ecosystem literature identifies interdependent value creation as a central issue, supporting a governance design that combines shared service goals with separate institutional obligations (Fatma & Bhatt, 2026).

8. Phased Implementation and Fiscal Evaluation

Implementation should begin with a documented baseline of destinations, business listings, existing government data, legal responsibilities, and platform

functionality. This foundation stage would identify duplication, gaps, and privacy issues before any major technical procurement. A bounded pilot could then test updated destination information, user accessibility, feedback procedures, and the participation of small tourism enterprises. Table 3 presents indicative stages and monitoring measures rather than dates or budgets adopted by the city.

Table 3. Implementation Sequence and Proposed Evaluation Indicators

Stage	Administrative activity	Evidence to monitor
Foundation (0–6 months)	Inventory datasets and assign legal data owners	Directory completeness; privacy impact assessment
Pilot (6–12 months)	Test verified information, accessibility, and MSME onboarding	Active listings; update latency; inclusion rate
Interoperability (12–24 months)	Deploy controlled data exchange and partner integration	Validated exchanges; uptime; error and consent logs
Fiscal evaluation (from 24 months)	Compare business activity with disaggregated fiscal data	Visitor spending; taxable turnover; verified PBJT
Adaptive review (ongoing)	Audit equity, security, user feedback and costs	Independent quality checks; complaint closure

Source: Author, 2026

Following pilot assessment, the government could introduce controlled data exchanges between participating institutions and service providers. Each interface should be tested for reliability, permissions, and correction procedures before wider deployment. Digital tourism analytics would then examine aggregated visitor patterns and service demand, while connections with local economic data should remain subject to lawful access and validation. Successful transitions depend on observed performance, not simply completion of a project calendar (Xu et al., 2024). Monitoring should combine operational, inclusion, economic, and fiscal indicators. Examples include verified destination and business records, timeliness of updates, completed service referrals, participation by smaller enterprises, visitor satisfaction, and suitably classified transactions. Tourism-related PAD realization may be examined only through official financial records and a defensible attribution design. Regular reviews should assess cost, complaints, digital exclusion, cybersecurity, and environmental or service-quality implications before recommending expansion. Before deployment, the city should also publish a concise evaluation protocol explaining the baseline, responsible agencies, permitted data uses, review frequency, and circumstances in which a proposed digital function would be discontinued or redesigned.

9. Implementation Risks and Safeguards

Fragmented agency databases, outdated listings, unequal digital participation, and limited technical skills pose immediate governance risks. These conditions can produce inconsistent information, disadvantage smaller businesses, or encourage investment in features that public institutions cannot maintain. The city should therefore conduct periodic data-quality reviews, establish responsibility for corrections, and provide assisted access for enterprises and users facing barriers. Digital inclusion must

be assessed through actual participation, not platform availability alone (Yao et al., 2025).

Privacy and cybersecurity issues become more significant when information systems exchange identifiable or commercially sensitive data. Data custodians should record the lawful purpose of each dataset, access permissions, retention periods, and reporting restrictions in accordance with Indonesia's personal-data protection framework (Republic of Indonesia, 2022b). Partnership agreements should address incident notification, error correction, complaint escalation, and independent oversight. Additional scrutiny is warranted for automated recommendations that may reproduce bias or present inaccurate tourism information (Kashif & Muhammad, 2026).

A further risk is technology-centered policymaking that neglects cleanliness, safety, transport accessibility, destination maintenance, and frontline service quality. The success of a smart destination cannot be judged solely by interface functionality when underlying visitor needs remain unmet. Evaluation should consequently combine digital-service metrics with physical destination conditions, business experience, visitor satisfaction, and administrative costs. This multidimensional approach reduces the risk of defining innovation as technological expenditure rather than measurable public value (Dwivedi et al., 2026).

CONCLUSION

This study concludes that the development of Smart Tourism in Pekanbaru represents a strategic opportunity to strengthen urban tourism governance through the integration of digital technology, institutional coordination, and local economic development. The existing regulatory framework, particularly Regional Regulation Number 1 of 2021 concerning the 2021–2036 Regional Tourism Development Master Plan, provides an institutional foundation for tourism development, while SIPAMAN serves as an initial digital information infrastructure. The recorded 2,254,582 domestic tourist visits in 2024 indicate substantial tourism activity that could support broader economic opportunities. Nevertheless, the availability of digital tourism information does not independently demonstrate integrated service delivery or measurable fiscal benefits.

Accordingly, this study proposes an integrated Smart Tourism governance framework comprising five interconnected components: reliable destination information, integrated tourism services, evidence-based governance, digital promotion, and inclusive local enterprise linkages. These components establish a conceptual foundation for improving destination accessibility, strengthening stakeholder collaboration, facilitating tourism-related economic activities, and promoting accountable public administration. The proposed framework emphasizes that successful Smart Tourism innovation depends not merely on technological advancement but also on institutional readiness, information reliability, interoperability, data protection, equitable business participation, and continuous policy evaluation.

The relationship between Smart Tourism development and local own-source revenue (PAD) must therefore be understood as a conditional policy mechanism rather than an established causal relationship. Although digital integration may improve visitor engagement, service accessibility, business participation, and economic transactions, its contribution to municipal revenue depends on actual tourist expenditure, legally

taxable activities, administrative compliance, and verified fiscal receipts. Consequently, the principal contribution of this study is the formulation of a context-sensitive and auditable policy framework that distinguishes observable digital platform outputs from economic outcomes and attributable fiscal performance. Its implementation requires clearly defined institutional responsibilities, phased service integration, measurable performance indicators, and continuous governance monitoring. However, reliance on documentary evidence limits the ability to establish the effectiveness of SIPAMAN or quantify its contribution to PAD.

Future research should incorporate visitor expenditure surveys, enterprise transaction records, platform usage analytics, stakeholder interviews, and disaggregated municipal revenue data. Longitudinal and comparative evaluations involving participating and nonparticipating enterprises or destinations are also necessary to assess policy effectiveness while accounting for seasonal variations, broader economic conditions, and potential displacement of business activity. Such empirical investigations would provide a stronger basis for determining whether integrated Smart Tourism governance generates sustainable, inclusive, and verifiable economic and fiscal benefits for Pekanbaru.

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