

# OPEN DATA AND THE MATURITY OF TOURISM PUBLIC SERVICE GOVERNANCE: EVIDENCE FROM PALUTUNGAN

**Nanang Suparman**

*UIN Sunan Gunung Djati Bandung, Indonesia*

*Email: nanang.suparman@uinsgd.ac.id*

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## Abstract

Open data has become increasingly important for strengthening tourism public service management, yet its practical integration at micro-destination level remains underexplored. This study aims to analyze the maturity of open data-based tourism public service management in the Palutungan/Cisantana tourism area of Kuningan Regency. The study is grounded in Open Government Data Maturity, Public Service Logic, and Smart Tourism Destination perspectives. A qualitative-evaluative case study design was applied through document analysis, digital observation of official tourism and open data platforms, and semi-structured interviews with relevant stakeholders. The findings show that tourism data are available through KuninganBeu, Open Data of Kuningan Regency, BPS-Statistics, and regional planning documents, but remain descriptive, fragmented, and weakly connected to service evaluation, visitor flow management, complaint handling, and operational decision-making. The study concludes that Palutungan/Cisantana is at a developing maturity level, requiring stronger metadata, data integration, and service-oriented governance for sustainable, accountable, and evidence-based destination service improvement.

**Keywords:** Open Data; Tourism Public Service; Destination Governance

## A. INTRODUCTION

The transformation of tourism public service management increasingly requires local governments to manage destinations through data, technology, and information systems that can support faster, more accurate, and measurable service-related decisions (Xu, Zhang, & Liu, 2023). The use of information technology in tourism not only strengthens destination promotion but also improves service quality, information access, and the relationship between destination managers and visitors (Rusdi, 2019). Within the framework of digital governance, open government data enables public institutions to create public value through transparency, efficiency, data reuse, and evidence-informed decision-making (Petrović, Kocić, & Vukmirović, 2022). The implementation of open data in public administration also requires inter-agency collaboration, resource readiness, and governance innovation so that data does not remain merely as published information but can be meaningfully reused by both government and society (Safaria, Widianingsih, Muhtar, & Irawati, 2019). The One Data Indonesia agenda further reinforces the importance of data quality, coordination, and governmental collaboration, as issues of accuracy and data integration remain persistent challenges in public decision-making (Susniwati, Yusuf, & Aisyah, 2022).

Regional tourism management requires the capacity to interpret visitor patterns, data quality, tourist concentration, and destination recovery dynamics so that tourism policies are not driven merely by administrative intuition. The use of social media analytics in West Java tourism marketing policy demonstrates that digital data can capture public perceptions and provide meaningful input for destination promotion strategies (Rispiaga, Widianingsih, & Nurasa, 2023). Penta Helix collaboration in regional tourism development indicates that destination success depends not only on government intervention but also on the involvement of academics, businesses, communities, media, and local society (Wahidah, Nurasa, & Karlina, 2022). The role of government public relations in tourism development shows that public information, policy communication, and service readiness are essential elements in sustaining tourists' trust in destinations (Kadarisman, 2021). Kuningan Regency has strong nature-based tourism potential and a substantial number of tourist visits, yet regional planning documents still identify problems related to tourism human resources, destination arrangement, marketing infrastructure, promotional variation, publication networks, spatial use, and tourism contribution to local revenue (Government of Kuningan Regency, 2025).

The Palutungan/Cisantana area in Kuningan Regency represents a strategic nature-based tourism destination because it is situated within a mountainous tourism landscape that includes hiking activities, camping areas, culinary attractions, and local recreational spaces. This area functions not only as a tourism site but also as a public service arena that brings together tourists, local government, destination managers, local business actors, communities, and village residents. The main problem lies in the unclear maturity level of open data-based tourism public service management, particularly in relation to the availability of micro-level destination data, information timeliness, visitor data integration, facility completeness, service capacity, complaint channels, and data use for decision-making. Data available through government portals and tourism information media indicate the presence of digital initiatives, but they do not yet fully demonstrate whether such data have been managed as a basis for service evaluation, visitor crowd mitigation, evidence-based promotion, and the improvement of tourist experience. This study focuses on assessing the maturity of open data-based tourism public service management in Palutungan/Cisantana in order to examine more concretely the relationship among data openness, destination governance, and public service quality.

Previous studies provide important conceptual and empirical foundations for research on data, tourism, and digital public services (Gretzel, Sigala, Xiang, & Koo, 2015; Wirtz, Weyerer, Becker, & Müller, 2022). Gretzel et al. (2015) show that smart tourism develops through the interconnection of technology, data, tourist experience, and destination business ecosystems. Wirtz et al. (2022) find that open government data contributes to transparency, participation, innovation, and public value creation, although its success is strongly shaped by data governance quality and the broader ecosystem of data use. Demonstrate that open government data analytics on tourist visits in West Java can reveal patterns of decline, recovery, spatial concentration, and tourism data quality after the pandemic. These studies confirm the important role of data and technology in tourism, although they have not specifically assessed the maturity of open data-based public service management at the micro-destination level in local tourism areas (Gretzel et al., 2015; Wirtz et al., 2022).

This study aligns with previous research in positioning digital data, open government data, and tourism governance as analytical foundations for strengthening tourism destinations (Gretzel et al., 2015; Wirtz et al., 2022). Another point of convergence lies in the shared concern with how data generate value, whether through tourist experience, governmental

transparency, or the analysis of destination visit patterns (Gretzel et al., 2015; Wirtz et al., 2022). This study differs from prior research because it does not stop at the conceptual discussion of smart tourism, the ecosystem of open government data, or provincial-scale tourist visit analytics, but instead focuses on assessing the maturity of public service management in the Palutungan/Cisantana tourism area (Gretzel et al., 2015; Wirtz et al., 2022). Another distinction lies in its public administration perspective, as open data is positioned as a managerial instrument for improving tourism services rather than merely as an information asset, a transparency mechanism, or a statistical analytics resource (Gretzel et al., 2015; Wirtz et al., 2022). This position enables the study to operationally connect data availability, accessibility, timeliness, metadata quality, system integration, and data use with the practice of regional tourism public service delivery (Gretzel et al., 2015; Wirtz et al., 2022).

The literature on digital tourism has extensively discussed the use of big data, algorithms, and smart technologies in tourism destinations, yet limited attention has been given to the maturity of open data-based public services in local destinations (Widarti, Saputra, & Putri, 2024). The most prominent gap addressed in this study is the combination of a practical-knowledge gap and an empirical gap, because knowledge regarding the benefits of open data has developed considerably, while evidence on its use in tourism public service management practices at the destination-area level remains insufficient (Miles, 2017). Research on Denpasar Open Data shows that public information openness can strengthen public services, but data validity and public access remain important challenges in the implementation of open government (Wijaya, Lukman, Dewi, & Riani, 2025). A study on visitor perceptions at Palutungan Tourism Object provides insights into tourist experience, but it has not examined how destination data are managed, opened, integrated, and used as a basis for improving public services (Ningsih, Adhya, & Hendrayana, 2025). Studies on the implementation of One Data Indonesia further indicate that collaboration and data coordination remain important tasks for local governments, making the analysis of open data maturity in Palutungan/Cisantana relevant for expanding empirical understanding of data governance at the destination level (Setiyawan, Yusrina, & Mubarakah, 2025).

The urgency of this study lies in the need to connect tourism destination development with more adaptive, collaborative, and data-driven public service management capacity (Renyaan, Widianingsih, & Nurasa, 2023). Research on tourist satisfaction with tourism mobility services shows that service quality can be assessed through reliability, responsiveness, assurance, empathy, and tangibles, indicating the importance of service data management in understanding visitor needs (Suyadnya, Pramana, & Putra, 2022). Integrated and sustainable tourism strategies emphasize that digital promotion, destination information, and service quality improvement must operate together to prevent tourism management from becoming fragmented (Trimartuti, 2022). The use of tourism promotional communication media by local governments shows that the regular, transparent, and accessible provision of tourism potential data forms an important part of public information services (Mingkid, 2015). The implementation of One Data Indonesia in promoting public data transparency and access indicates that data openness must be directed toward ease of access, clarity of information, and meaningful use by both society and government (Saepudin, Solehatunnisa, Lestari, Gunawan, & Fadilah, 2025). This study aims to analyze the maturity level of open data-based tourism public service management in the Palutungan/Cisantana tourism area of Kuningan Regency.

## B. LITERATURE REVIEW

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## Open Government Data Maturity

Open Government Data Maturity refers to the extent to which public institutions are prepared to provide, manage, disclose, integrate, and utilize public data to strengthen transparency, accountability, innovation, and evidence-based decision-making (Janssen, Charalabidis, & Zuiderwijk, 2012). The maturity of open data is not merely reflected in the existence of a data portal, but also in data quality, information timeliness, metadata completeness, accessibility, and the extent to which data can be reused by multiple stakeholders (Dawes & Helbig, 2010). In the context of digital government, open data serves as a strategic instrument that enables governments, citizens, businesses, and communities to identify public problems in a more transparent and collaborative manner (Zuiderwijk, Janssen, & Dwivedi, 2015). The maturity level of open data indicates whether data have functioned as a strategic public asset or remain limited to administrative documents published without clear managerial use (Attard, Orlandi, Scerri, & Auer, 2015). In this study, this perspective is used to assess the extent to which tourism data in Palutungan/Cisantana are available, accessible, structured, integrated, and utilized in tourism public service management.

Indicators:

- Availability of tourism data
- Data accessibility
- Data timeliness
- Metadata completeness
- Data quality and consistency
- Inter-system data integration
- Data reusability
- Data use for service-related decision-making

## Public Service Logic

Public Service Logic views public service as a process of value creation that is not produced solely by government institutions, but also shaped through interactions among service providers, service users, communities, and other actors within the service ecosystem (Osborne, Radnor, & Nasi, 2013). This perspective emphasizes that public service quality should not be assessed only through administrative outputs, but also through user experience, needs, participation, and the value perceived by service users (Osborne, 2018). In tourism public services, visitors are not merely passive recipients of services, but also contribute to service quality through feedback, travel behavior, reviews, complaints, and participation in the destination ecosystem (Osborne, 2021). This approach is relevant because tourism destination management requires local governments to connect facilities, information, safety, comfort, promotion, and complaint responses as an integrated public service system (Alford, 2016). In this study, Public Service Logic is used to explain how open data can support public value creation in tourism services through more responsive, transparent, and visitor-oriented service management.

Indicators:

- Visitor-oriented service needs
- Quality of service experience
- Responsiveness of destination managers
- Availability of service information

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- Complaint and feedback mechanisms
  - Stakeholder involvement
  - Inter-actor service coordination
  - Perceived public service value

### **Smart Tourism Destination**

Smart Tourism Destination refers to the capacity of a tourism destination to integrate digital technology, data, information infrastructure, and stakeholder collaboration in order to improve visitor experience and destination management effectiveness (Gretzel, Sigala, Xiang, & Koo, 2015). A destination can be considered smart when it is able to use technology and data to provide accurate information, responsive services, personalized experiences, and more adaptive governance coordination (Buhalis & Amaranggana, 2015). This perspective positions data as a critical foundation for connecting visitor needs with destination capacity, digital promotion, mobility, safety, facilities, and service sustainability (Gretzel et al., 2015). In regional tourism contexts, the concept of a smart tourism destination should not be understood merely as the adoption of advanced technology, but as the capacity of a destination to use digital information effectively in tourism service management (Boes, Buhalis, & Inversini, 2016). In this study, Smart Tourism Destination is used to analyze the extent to which Palutungan/Cisantana has moved toward data-driven, digitally connected, and visitor-responsive destination management.

Indicators:

- Digital information infrastructure
- Data-based destination information
- Destination data integration
- Digital tourism services
- Digital destination promotion
- Visitor capacity management
- Tourism stakeholder collaboration
- Information-based visitor experience

### **C. RESEARCH METHODOLOGY**

This study employs a qualitative-evaluative case study approach to analyze the maturity of open data-based tourism public service management in the Palutungan/Cisantana tourism area of Kuningan Regency. This method is appropriate because the study seeks to understand a contemporary governance phenomenon within a specific local context, particularly how tourism data are provided, managed, integrated, and utilized to support public service delivery (Yin, 2018). The evaluative orientation enables the study to assess the maturity of tourism open data management through indicators such as data availability, accessibility, timeliness, metadata completeness, data quality, system integration, data reuse, and the use of data in service-related decision-making (Open Data Institute, 2015). Data are collected through document analysis, digital observation, and semi-structured interviews; document analysis examines regional planning documents, tourism datasets, open data portals, tourism dashboards, visitor statistics, and public service-related documents, while digital observation reviews the structure, accessibility, completeness, and timeliness of tourism information available on official government platforms. Semi-structured interviews are conducted with

relevant stakeholders, including representatives of the tourism office, communication and information office, village government, destination managers, local tourism actors, and selected visitors, in order to capture institutional, managerial, and user perspectives on tourism public service delivery (Creswell & Poth, 2018).

The sampling technique used in this study is purposive sampling, supported by snowball sampling when additional informants are required. Purposive sampling is selected because the study requires information-rich participants who have direct knowledge, institutional roles, or practical experience related to tourism data management, open data implementation, destination governance, and public service delivery in Palutungan/Cisantana (Palinkas et al., 2015). Snowball sampling is used to identify additional actors who may not be visible at the initial stage but are directly involved in data reporting, visitor management, promotion, facility services, or complaint handling. Data analysis is conducted through qualitative content analysis, thematic analysis, and maturity assessment, where documents and digital sources are examined to identify the availability and quality of open tourism data, while interview data are coded, categorized, and interpreted to generate themes related to service management, stakeholder coordination, and data utilization (Braun & Clarke, 2006). The final analysis integrates findings from documents, digital observation, and interviews to determine the maturity level of open data-based tourism public service management in Palutungan/Cisantana and to identify the main managerial gaps that affect the development of data-driven tourism services.

## D. RESULT AND DISCUSSION

### Maturity of Tourism Data Availability in Palutungan/Cisantana

The field data mapping indicates that tourism data for Palutungan/Cisantana are available across several official and semi-official digital channels. The available data include destination profiles, location information, operating hours, visitor capacity, ticket information, basic facilities, and visual descriptions of tourism sites. The official tourism information platform records specific destination entries such as PPGC Palutungan and Buper Palutungan Curug Putri, while open data portals provide broader datasets on tourist visits and tourism objects in Kuningan Regency. Regional planning documents also identify Palutungan/Cisantana as part of Kuningan's nature-based tourism potential and place tourism development within the broader agenda of local economic growth. These findings show that the basic layer of tourism data availability already exists, yet its relevance for public service management depends on the depth, specificity, and usability of the data.

**Table 1. Availability of Tourism Data in Palutungan/Cisantana as the Basis for Assessing Open Data-Based Public Service Management Maturity**

Type of Data Identified	Data Source	Form of Information	Strength of the Finding	Limitation for Public Service Management
PPGC Palutungan profile	KuninganBeu tourism information portal	Address, 24-hour operating hours, visitor capacity of 149 people, parking area, toilets, and food and beverage stalls	Indicates the availability of micro-level destination data accessible to the public	Does not yet provide data on service performance, visit patterns, complaints, or facility evaluation
Buper	KuninganBeu	Address, operating	Provides	Not yet connected to

Type of Data Identified	Data Source	Form of Information	Strength of the Finding	Limitation for Public Service Management
Palutungan Curug Putri profile	tourism information portal	hours, visitor capacity of 8,000 people, parking area, prayer room, pavilion, camping ground, and weekday ticket price of IDR 15,000	relatively detailed basic service information for visitors	actual capacity analysis, visitor density, or tourist experience quality
Monthly ODTW visitor dataset	Open Data of Kuningan Regency	Monthly visitor data for tourist attractions in Kuningan Regency	Provides historical data relevant for identifying tourism visit trends	The extent to which the data are specific enough for Palutungan/Cisantana still requires further examination
Recapitulation of domestic and international tourists	Open Data of Kuningan Regency	Number of domestic and international tourists in Kuningan Regency	Supports the macro-level context of tourism growth and regional tourism dynamics	Insufficient for assessing micro-level service conditions in a specific tourism area
Monthly ODTW visitor statistics	BPS-Statistics of Kuningan Regency	Monthly statistics on domestic and international visitors to tourist attractions	Can serve as an official comparison source for regional tourism data	Needs to be compared with other portals to assess consistency, completeness, and data updates
Domestic and international tourist statistics	BPS-Statistics of Kuningan Regency	Statistical data on domestic and international tourists in Kuningan Regency	Provides an official statistical reference for validating regional tourism data	Still macro-oriented and does not directly explain service maturity in Palutungan/Cisantana
RPJMD of Kuningan Regency 2025–2029	Government of Kuningan Regency	Tourism development direction, nature-based tourism potential, and issues related to human resources, promotion, publication, and local revenue	Provides a policy basis for assessing the relevance of open data in tourism public service management	Macro-oriented and does not directly explain data maturity in Palutungan/Cisantana

**Source:** Processed by the author, 2025.

Table 1 shows that tourism data for Palutungan/Cisantana are already available through several official sources, including the KuninganBeu tourism information portal, Open Data of Kuningan Regency, BPS-Statistics of Kuningan Regency, and the RPJMD of Kuningan Regency 2025–2029. The available data provide basic information on destination profiles,

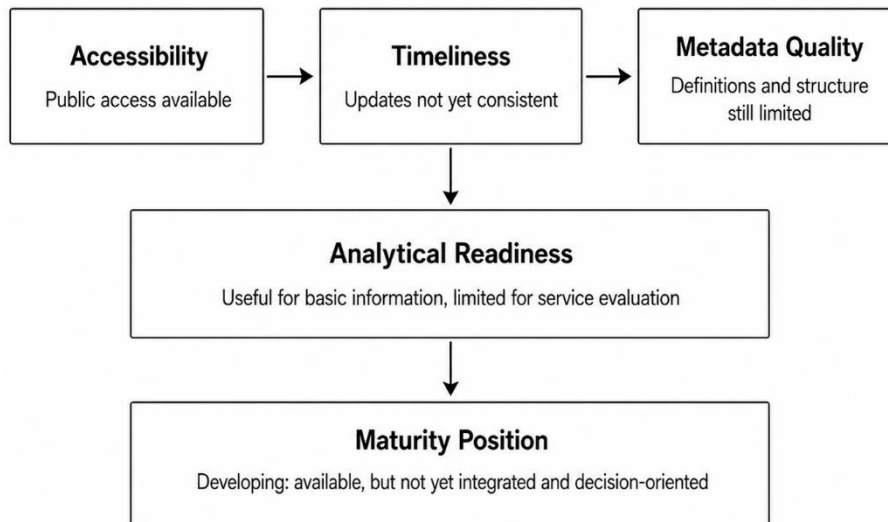
visitor capacity, facilities, ticket prices, operating hours, tourist visit statistics, and regional tourism policy direction, indicating that the initial foundation of open data-based tourism management has been established. However, most of the data remain descriptive, fragmented, and macro-oriented, making them insufficient to fully explain micro-level service performance in Palutungan/Cisantana. The table also indicates that the existing data have not yet been systematically connected to visitor density analysis, complaint patterns, facility evaluation, service quality assessment, or evidence-based operational decision-making. Therefore, the maturity of tourism data availability in Palutungan/Cisantana can be positioned at a developing level, where data already exist and support public information access but have not yet functioned as an integrated managerial instrument for improving tourism public service delivery.

Previous research supports the argument that tourism data availability becomes meaningful only when it can inform destination management, service innovation, and visitor-oriented decision-making (Gretzel, Sigala, Xiang, & Koo, 2015). Open tourism data can strengthen destination management because tourism is an information-intensive sector that depends on accurate, reusable, and accessible data for coordination and innovation (Pesonen & Lampi, 2016). Smart tourism studies also show that data availability needs to be connected with digital infrastructure, stakeholder collaboration, and service processes in order to improve the effectiveness of destination governance (Boes, Buhalis, & Inversini, 2016). Research on open government data emphasizes that data publication alone cannot produce public value unless users can access, interpret, reuse, and connect the data with policy or service needs (Zuiderwijk, Janssen, & Dwivedi, 2015). Studies on tourism data analytics further indicate that visitor data can support destination planning, but its usefulness depends on data quality, granularity, and the capacity of institutions to transform data into strategic action.

The findings in Palutungan/Cisantana reveal a gap between data availability and managerial readiness. Destination data are present, but the information still prioritizes descriptive visibility rather than analytical readiness for public service management. Data on visitor capacity, facilities, ticketing, and operating hours can support basic tourism information services, yet they do not sufficiently explain service performance, visitor density, complaint patterns, accessibility barriers, or facility adequacy. This pattern suggests that the area has established the initial foundation of open tourism data but has not yet reached a level where data can systematically guide service improvement. The assessment of maturity therefore needs to move from the question of whether data exist to the question of how far the data can support service-related decisions.

The maturity of tourism data availability in Palutungan/Cisantana can be positioned at a developing level. This position reflects the presence of destination data, official tourism information, and broader visitor datasets, combined with the limited specificity of micro-level service data. The available data already help introduce the destination to the public, but they still provide limited support for operational evaluation, cross-actor coordination, and evidence-based service improvement. The main challenge lies in transforming fragmented and descriptive data into integrated, updated, and decision-oriented information for tourism public service management. This condition makes data accessibility, timeliness, and metadata quality central elements for determining whether the existing data can progress from basic availability toward stronger open data maturity.

## Accessibility, Timeliness, and Metadata Quality of Tourism Open Data



**Figure 1. Tourism Open Data Readiness in Palutungan/Cisantana**

**Source: Processed by the author, 2025.**

Data mapping indicates that tourism information on Palutungan/Cisantana is available through KuninganBeu, Open Data of Kuningan Regency, BPS-Statistics of Kuningan Regency, and the RPJMD of Kuningan Regency 2025–2029. KuninganBeu presents destination information through web pages containing tourism profiles, locations, facilities, operating hours, visitor capacity, and ticket prices. Open Data of Kuningan Regency provides more structured tourism datasets, particularly data on tourist visits and tourism attraction objects at the regency level. BPS-Statistics of Kuningan Regency provides tourism statistical data that can serve as a comparative source against data available on regional government portals. The RPJMD of Kuningan Regency 2025–2029 strengthens the regional tourism policy context, making data accessibility inseparable from the issues of timeliness and metadata quality.

The availability of several data channels indicates that tourism information on Palutungan/Cisantana is already open to the public, although its level of openness has not fully met the needs of service analysis. Destination information is relatively easy to find, but its presentation remains predominantly narrative and visual, making it more useful for promotion than for service evaluation. Tourism datasets available through the open data portal are more structured, yet their coverage remains stronger at the Kuningan Regency level than at the micro level of Palutungan/Cisantana. Data timeliness becomes an important issue because tourism service information requires clear update schedules, consistent reporting periods, and traceable data custodians. Metadata quality also determines data usability because available data remain difficult to use for decision-making when they lack variable definitions, measurement units, recording methods, and relationships among datasets.

Previous studies emphasize that open data accessibility does not merely mean that data can be found, but also that data can be read, downloaded, understood, and reused for public and policy purposes (Janssen, Charalabidis, & Zuiderwijk, 2012). Data timeliness is an important element of digital governance because inconsistently updated data can weaken decision accuracy and reduce user trust in government information systems (Dawes & Helbig, 2010). Metadata functions as a key prerequisite for open data utilization because it helps users understand the source, structure, context, period, and limitations of the data provided (Attard,

Orlandi, Scerri, & Auer, 2015). Data publication does not automatically generate public value when data are difficult to understand, incomplete, outdated, or disconnected from service-related decision-making needs (Zuiderwijk, Janssen, & Dwivedi, 2015). Smart tourism studies also show that destination information requires sufficient quality, granularity, and connectivity to support tourism services that are responsive, adaptive, and oriented toward visitor needs (Gretzel, Sigala, Xiang, & Koo, 2015).

The findings indicate that the main issue of data accessibility in Palutungan/Cisantana does not lie in the absence of information channels, but in the limited conversion of open data into information that is ready for service management. Destination data already help visitors obtain basic information before their visit, but they do not yet provide sufficient insight into visitor density, facility conditions, complaint patterns, actual capacity, and service needs at specific times. Statistical data from the open data portal and BPS provide a basis for interpreting tourism trends, but they remain insufficient to explain service dynamics in Palutungan/Cisantana as a micro-level tourism area. Metadata quality becomes the main distinction between data that are merely open and data that are genuinely ready for policy evaluation, actor coordination, and service improvement. This position indicates that data accessibility maturity remains at a developing stage because public access is already available, while the readiness of data for managerial analysis remains limited.

Accessibility, timeliness, and metadata quality show that the tourism data system in Palutungan/Cisantana already has a digital foundation, but has not yet formed an integrated data ecosystem. Destination information supports visitors' initial information needs, while statistical datasets help the government interpret broader tourism dynamics. Limitations emerge when the data are not sufficiently specific, not fully updated, and not supported by strong metadata for service-related decision-making. This condition confirms that open data maturity cannot stop at ease of access, but must move toward stronger connections among data, service processes, and managerial decisions. The integration of data with tourism public service practices becomes a decisive factor in determining whether the available data genuinely work in destination management.

### **Integration of Open Data with Tourism Public Service Management**

Field data indicate that tourism data on Palutungan/Cisantana are available through several official channels, yet their connection with public service management remains limited. Destination information provides basic details on location, facilities, operating hours, ticket prices, and visitor capacity, while statistical datasets provide broader information on tourism visits in Kuningan Regency. The available data help visitors obtain initial information before visiting the destination and support the government in documenting regional tourism potential. However, the data do not yet clearly show how information on visits, facilities, capacity, complaints, and service conditions is integrated into operational decision-making. This condition indicates that the relationship between open data and tourism public service management requires closer assessment.



**Figure 2. KuninganBeu Tourism Information Portal as a Digital Gateway for Tourism Public Services in Kuningan Regency**

**Source:** Screenshot by the author from KuninganBeu tourism information portal, 2025.

KuninganBeu functions as a digital gateway for tourism information services in Kuningan Regency by providing navigation menus such as tourism destinations, culinary services, accommodation, events, tourism maps, visit data, and partnership features. The portal indicates that local tourism information has been placed within a digital public service platform, allowing visitors to access destination-related information through a single online channel. However, the screenshot also shows that the portal's public interface primarily functions as an information and promotion medium, while the extent to which its data are integrated with service evaluation, visitor management, complaint handling, and operational decision-making still requires further analysis. Therefore, this visual evidence supports the finding that Palutungan/Cisantana is situated within an emerging digital tourism information ecosystem, but open data-based service integration remains a critical issue for assessing maturity.



**Figure 3. Physical Entrance of Palutungan Nature Tourism Area as an Offline Service Interface in Kuningan Regency**

**Source:** Field documentation by the author, 2025.

Figure 3 illustrates the physical entrance of the Palutungan nature tourism area, which represents the offline service interface encountered by visitors before entering the destination. The entrance signage indicates the existence of destination identity and basic visitor orientation, but it does not yet demonstrate how physical service information is connected with digital data, visitor management, complaint handling, or operational decision-making. This visual evidence strengthens the argument that Palutungan/Cisantana already has recognizable destination infrastructure, while the integration between physical tourism services and open data-based public service management remains limited. The figure therefore supports the assessment that the destination is still positioned as an emerging data-supported tourism area rather than a fully data-driven public service system.

The findings suggest that the main issue is not the absence of tourism data, but the limited use of data as a managerial instrument. Data that remain descriptive can support public information access, yet they provide limited value for evaluating service quality, managing visitor flows, anticipating crowding, and improving facility readiness. Destination managers require more specific, updated, and service-oriented data to make decisions that respond to actual visitor needs. Open data can support tourism services only when it moves from publication to integration, interpretation, and practical use in daily management. The maturity of open data-based tourism public service management therefore depends on the extent to which data become part of service planning, coordination, monitoring, and evaluation.

Previous studies show that open government data can create public value only when data are connected to institutional capacity, user needs, and decision-making processes (Zuiderwijk, Janssen, & Dwivedi, 2015). Research on public service logic emphasizes that public value is produced through interaction among service providers, users, and other actors within the service ecosystem, rather than through administrative outputs alone (Osborne, Radnor, & Nasi, 2013). Smart tourism literature also argues that data and digital infrastructure must be integrated into destination governance to improve visitor experience and service responsiveness (Gretzel, Sigala, Xiang, & Koo, 2015). Studies on smart tourism destinations indicate that technology adoption becomes meaningful when it strengthens coordination, information quality, and adaptive destination management (Boes, Buhalis, & Inversini, 2016). Research on tourism data analytics further demonstrates that visitor data can support planning and recovery strategies, but its usefulness depends on data granularity, institutional readiness, and the ability to translate data into strategic action.

The empirical pattern in Palutungan/Cisantana shows that open data has not yet become a fully embedded component of tourism public service management. Data availability and accessibility already support the public visibility of the destination, but they have not sufficiently informed service evaluation, visitor density control, complaint response, facility planning, or cross-actor coordination. The strongest finding is the separation between data publication and service utilization, where information exists but has not yet operated as a structured basis for managerial decisions. This separation places Palutungan/Cisantana at a developing level of open data-based service maturity because the digital foundation is present, while managerial integration remains weak. The area therefore reflects an emerging data-supported destination rather than a fully data-driven tourism service system.

The integration of open data with tourism public service management becomes the key point for interpreting the overall maturity of Palutungan/Cisantana. Data availability, accessibility, timeliness, and metadata quality provide the technical foundation, but service maturity depends on whether those elements shape real decisions in destination management.

Tourism data need to support facility evaluation, visitor flow management, complaint handling, promotional planning, stakeholder coordination, and service improvement. The current condition shows that Palutungan/Cisantana has moved beyond basic information provision, yet it has not fully transformed data into an operational governance tool. This maturity position provides a basis for discussing how open data can generate public value, strengthen service logic, and support the transition toward a more data-driven tourism destination.

### **Discussion: From Open Data Availability to Tourism Public Service Maturity**

The results show that Palutungan/Cisantana already has a basic digital foundation for tourism information through KuninganBeu, Open Data of Kuningan Regency, BPS-Statistics of Kuningan Regency, and regional planning documents. These sources provide information on destination profiles, visitor capacity, facilities, operating hours, ticket prices, tourist visit statistics, and broader policy directions for tourism development. The findings also show that digital tourism information has improved public visibility by enabling visitors to access basic destination information before visiting the area. The available data remain uneven because destination-level information is more promotional, while statistical datasets remain stronger at the regency level than at the micro-destination level. This pattern indicates that open data availability has emerged, but its connection with public service maturity remains incomplete.

The main issue lies in the gap between data visibility and service usability. Tourism data already exist and can support public information access, yet they have not fully operated as a managerial basis for improving service delivery. Data on facilities, capacity, ticketing, and operating hours are useful for initial visitor orientation, but they remain insufficient for evaluating service quality, visitor density, complaint trends, facility adequacy, and operational readiness. Public service maturity requires data that are not only accessible but also specific, updated, interpretable, and embedded in decision-making routines. The findings therefore suggest that Palutungan/Cisantana is not facing a data absence problem, but a data integration and utilization problem.

Open government data creates public value when data are not only published but also reused, interpreted, and connected with institutional decision-making processes (Zuiderwijk, Janssen, & Dwivedi, 2015). Public service logic explains that service value emerges through interactions among government, users, communities, and other actors in the service ecosystem, rather than through administrative outputs alone (Osborne, Radnor, & Nasi, 2013). Smart tourism research emphasizes that digital infrastructure and tourism data must strengthen destination governance, visitor experience, and service responsiveness to become meaningful in practice (Gretzel, Sigala, Xiang, & Koo, 2015). Studies on smart tourism destinations show that technology adoption contributes to destination performance when it improves information quality, stakeholder coordination, and adaptive management capacity (Boes, Buhalis, & Inversini, 2016). Tourism big data research further demonstrates that visitor-related data can support destination planning and management, but its strategic value depends on data quality, analytical capacity, and the ability of institutions to translate data into actionable decisions (Li, Xu, Tang, Wang, & Li, 2018).

The findings from Palutungan/Cisantana extend this argument by showing that digital tourism information does not automatically produce service maturity. The strongest empirical insight is the separation between open data publication and operational service use. The portal and datasets provide basic public information, but they have not yet formed an integrated mechanism for visitor flow management, complaint handling, facility evaluation, promotional planning, and cross-actor coordination. This condition places Palutungan/Cisantana at a

developing level of open data-based tourism public service maturity. The destination has moved beyond conventional information provision, but it has not yet reached a stage where data consistently guide managerial decisions and service improvements.

This discussion positions open data as a managerial infrastructure rather than merely a transparency instrument. Tourism public service maturity in Palutungan/Cisantana depends on the ability of local institutions to connect data availability, accessibility, timeliness, metadata quality, and service-oriented decision-making. The findings indicate the need for a more integrated data ecosystem that links digital tourism information with operational management, stakeholder coordination, and visitor experience evaluation. Open data can generate stronger public value when it becomes part of service planning, monitoring, feedback management, and evidence-based improvement. This maturity reading provides a basis for formulating practical implications for strengthening data-driven tourism governance in local destinations.

## E. CONCLUSION

This study concludes that open data-based tourism public service management in the Palutungan/Cisantana tourism area has reached a developing level, as tourism data are already available through official digital channels but have not yet been fully integrated into service evaluation, visitor flow management, complaint handling, facility assessment, and evidence-based operational decision-making. This finding indicates that the main problem is not the absence of tourism data, but the limited transformation of available data into a managerial instrument for improving public service quality. The research objective has therefore been achieved by identifying the maturity position of open data-based tourism public service management and by showing that data availability, accessibility, timeliness, metadata quality, and service integration remain uneven at the micro-destination level. The study contributes to tourism public administration by shifting the discussion of open data from transparency and information provision toward its practical role in strengthening destination governance and public service maturity. Practically, local government, destination managers, and tourism stakeholders should develop standardized micro-level tourism datasets, improve metadata quality, connect visitor data with service monitoring, and integrate digital information with complaint response and facility management. Future research should apply comparative case studies, longitudinal designs, or mixed methods to examine open data maturity across different tourism destinations, while addressing the limitation of this study, which focuses on one local tourism area and relies mainly on available documents, digital observations, and stakeholder-based interpretation. From a policy perspective, Kuningan Regency needs a more integrated tourism data governance framework that links open data portals, tourism dashboards, village-level reporting, public service channels, and destination management practices to support more adaptive, accountable, and data-driven tourism public services.

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