WHY PRODESKEL IMPLEMENTATION VARIES: A COLLABORATIVE GOVERNANCE ANALYSIS OF VILLAGE DIGITAL DATA MANAGEMENT IN GIRI, BANYUWANGI

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ABSTRACT

This study examines why the implementation of the Village and Sub-District Profile Information System (Prodeskel) produces uneven outcomes across local settings in Giri, Banyuwangi, Indonesia. The research problem lies in the persistence of administrative, institutional, and participatory constraints despite the formal availability of a digital village information system. This study aims to analyze how collaborative governance shapes the implementation of Prodeskel and to identify the factors that determine its effectiveness at the local level. The analysis is grounded in the collaborative governance ansel and gash (2008) framework, particularly the dimensions of starting conditions, institutional design, facilitative leadership, and collaborative process. This research employed a qualitative comparative case study approach using interviews, document review, and thematic analysis. The findings show that the implementation of Prodeskel is influenced not only by technical capacity but also by the quality of leadership, institutional clarity, inter-actor trust, and the degree of community participation. Villages and sub-district actors with stronger facilitative leadership and clearer coordination mechanisms demonstrate more consistent data updating and better implementation outcomes. This study recommends strengthening institutional coordination, improving local technical capacity, and expanding participatory mechanisms to support inclusive and sustainable village digital governance.

INTRODUCTION

The digital transformation of government has become a central agenda in public sector reform, as it has fundamentally altered how the state manages information, formulates policies, and delivers services to citizens (Ngarawula et al., 2025; Susilowati, Rachmawati, & Rijanta, 2025). In its contemporary development, digital governance is no longer understood merely as the adoption of technology; rather, it is conceived as a governance process that requires data integration, inter-agency coordination, and the involvement of stakeholders in the production of public information (Nurlinah, Ansar, & Chowdhury, 2025). In Indonesia, this orientation has extended to the village level through the strengthening of information systems, the digitalization

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of public services, and the development of the smart village concept as part of local government modernization (Ummah, Aniqotul Maryam, Siti Wahidin, 2022) .

Within the context of village governance, data constitute an essential foundation for development planning, program targeting, and the evaluation of public service delivery. One of the instruments designed to address this need is the Village and Urban Ward Profile Information System (Prodeskel), which functions to provide territorial, demographic, potential, and developmental data on villages and urban wards (Noval, 2026). However, various studies indicate that the main challenge in village data management does not lie merely in the existence of the application itself, but rather in the quality, completeness, accuracy, and sustainability of data updating. Research on Data Desa Presisi further confirms that village data currently used for development purposes still suffer from significant problems related to precision and depth of information (Sofyan Sjaf et al., 2022).

These problems are clearly reflected in empirical findings on the quality of village data entry in Indonesia. Previous studies have reported that, in the 2020 Village and Urban Ward Profile dataset, approximately 62–65% of the 939 question items remained unanswered, indicating weak performance in data collection and updating at the local level (S. Sjaf et al., 2024). This condition suggests that the challenges surrounding Prodeskel are not merely technical or administrative in nature, but are also closely related to institutional capacity, organizational coordination, and the consistency of commitment among implementers (Noval, 2026; S. Sjaf et al., 2024). Thus, the accuracy of village data is largely determined by how governance processes are collectively carried out, rather than solely by the availability of a digital platform.

Table 1. Analysis of Barriers to Prodeskel Implementation

No.	Type of Barrier	Percentage (%)
1	Difficulty in Obtaining Data	40%
2	Diverse but Similar Data	20%
3	Data Synchronization Barriers	16%
4	Conditions in Villages/Urban Wards	15%
5	Other Technical Barriers	9%

(*Source: Grand Design Prodeskel, 2022*)

A more detailed picture of the barriers to Prodeskel implementation is presented in the Grand Design Prodeskel 2022 which categorizes the challenges into five main aspects (Direktorat Jenderal Bina Pemerintahan Desa, 2022). The most significant barrier is the difficulty in obtaining data, accounting for 40%, which indicates that the most fundamental problem in Prodeskel implementation lies at the stage of collecting data from the grassroots level. This finding points to issues such as limited human resource capacity at the village level, inadequate data collection instruments, and the suboptimal involvement of communities in the data collection process. At the same time, 20% of the barriers are attributed to the existence of diverse yet overlapping data, indicating duplication across programs and government systems. This condition not only creates repetitive administrative burdens for villages, but also increases the risk of data inconsistency and inaccuracy.

Furthermore, 16% of the barriers are related to data synchronization across levels of government, ranging from villages and subdistricts to regencies/municipalities and the central government. This problem reflects weak coordination, differing understandings of data instruments, and the absence of robust verification mechanisms across levels of government. Meanwhile, 15% of the barriers stem from conditions in villages and urban wards, such as limited hardware, low digital literacy among officials, and the frequent turnover of data management personnel. The remaining 9% consist of technical system constraints, including slow application access, user-unfriendly interfaces, and technical errors. Substantively, these data demonstrate that the challenges of Prodeskel implementation are not merely technical, but also structural and

collaborative. Therefore, problems of synchronization, overlapping instruments, and weak coordination among implementers indicate the need for a stronger collaborative governance approach in Prodeskel implementation.

This issue is important to investigate because inaccurate village data may lead to biased planning, mistargeted programs, and poor-quality public services. From a social perspective, weak data governance may also erode public trust in government and limit citizens' participation in local development (Aspinall, Berenschot, Savirani, & Ruhyanto, 2025). Studies on digital government transformation show that the success of public data management is strongly influenced by actor capacity, the quality of inter-institutional interaction, and trust between government and society (Ismail, Igirisa, & Tohopi, 2025). Therefore, the study of Prodeskel should not be positioned merely as an information systems inquiry, but rather as a public governance study that emphasizes the processes, relationships, and meanings underlying the implementation of village data policy.

Banyuwangi Regency provides a relevant context for examining this issue because it is recognized as one of the more progressive regions in digital government innovation through the development of digital villages and the Smart Kampung program (Jayanthi, Dinaseviani, Indraprahasta, & Sitompul, 2022). A number of studies have shown that village digitalization in Banyuwangi has improved service efficiency, expanded public access to government services, and strengthened the use of information technology at the local level (Devianty, Hastika, & Santosa, 2025). Nevertheless, these studies also indicate that digitalization does not automatically resolve data governance problems, as obstacles remain in the form of uneven bureaucratic capacity, unstable cross-actor coordination, and varying levels of digital literacy (Vassilakopoulou & Hustad, 2023). In this context, the implementation of Prodeskel in Banyuwangi deserves closer examination, particularly from the perspective of collaborative processes among stakeholders.

Generally, previous studies on Prodeskel, village e-government, and digital villages in Indonesia have tended to focus on policy design, application effectiveness, or the readiness of technological infrastructure (Noval, 2026; Ummah, Aniqotul Maryam, Siti Wahidin, 2022). Meanwhile, studies that specifically position Prodeskel implementation as an arena of collaborative governance, particularly through a qualitative examination of interaction processes among stakeholders, remain relatively limited (Bonny & Cahlikova, 2025; Devianty et al., 2025). This is where the research gap of the present study lies: there remains limited explanation of how the initial conditions for collaboration are formed, how institutional design operates, how facilitative leadership is exercised, and how trust and commitment are built within the governance of digital village data (Di Mascio, Coletti, & Natalini, 2025). In contrast to previous research, which has largely emphasized instrumental and technocratic aspects, this study positions Prodeskel as a collaborative governance process that determines the quality of village data.

To explain this issue, the present study employs the theory of collaborative governance developed by Ansell and Gash as its main analytical framework (Ansell & Gash, 2008). This theory emphasizes that the success of collaboration is shaped by starting conditions, institutional design, facilitative leadership, and the collaborative process, which evolves through dialogue, trust-building, commitment to the process, and shared understanding. The relevance of this framework is further reinforced by recent studies showing that, in digital public governance, institutional design and facilitative leadership are crucial factors in sustaining collaboration and enhancing policy implementation effectiveness (Torfing, Cristofoli, Gloor, Meijer, & Trivellato, 2020). Based on this framework, the present study aims to analyze the implementation of the Village and Urban Ward Profile Information System (Prodeskel) in Giri District, Banyuwangi Regency, through the lens of collaborative governance, with particular attention to the initial conditions of collaboration, institutional design, facilitative leadership, collaborative processes, and implementation factors. Theoretically, this study contributes to strengthening the body of scholarship on collaborative governance in the context of digital village data governance.

Practically, it provides a basis for improving village data management so that it becomes more accurate, participatory, and sustainable for both regional and village governments (Ismail et al., 2025).

METHOD

This study employed a qualitative approach within a postpositivist paradigm and adopted a case study design, as it sought to obtain an in-depth understanding and assessment of the implementation process of the Village and Urban Ward Profile Information System (Prodeskel) in Giri District, Banyuwangi Regency, from the perspective of collaborative governance. A qualitative approach was chosen because the study aimed to interpret meanings, processes, inter-actor interactions, and institutional dynamics that cannot be adequately explained solely through statistical figures. Within the qualitative research tradition, each paradigm offers a distinct way of viewing the object under investigation, as well as boundaries regarding what may be regarded as valid data in a study (Denzin & Lincoln, 2018). Creswell further emphasizes that this approach is used to explore and understand social problems based on participants' perspectives and the natural context of the inquiry (J. W. C. J. D. Creswell, 2011). The case study design is also relevant, as argued by (Yin, 2018), particularly when researchers intend to investigate intensively a contemporary phenomenon in its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident. Accordingly, this study views Prodeskel implementation not merely as an administrative process, but as a collaborative governance practice involving multi-actor interactions across different levels of government. The analytical framework of the study draws on Ansell and Gash's theory of collaborative governance, particularly the dimensions of starting conditions, institutional design, facilitative leadership, and collaborative process, which are used to explain how the quality of collaboration among stakeholders affects the implementation of Prodeskel (Ansell & Gash, 2008). Figure 1 illustrates the conceptual framework of this study, which is grounded in Ansell and Gash's (2008) collaborative governance theory.

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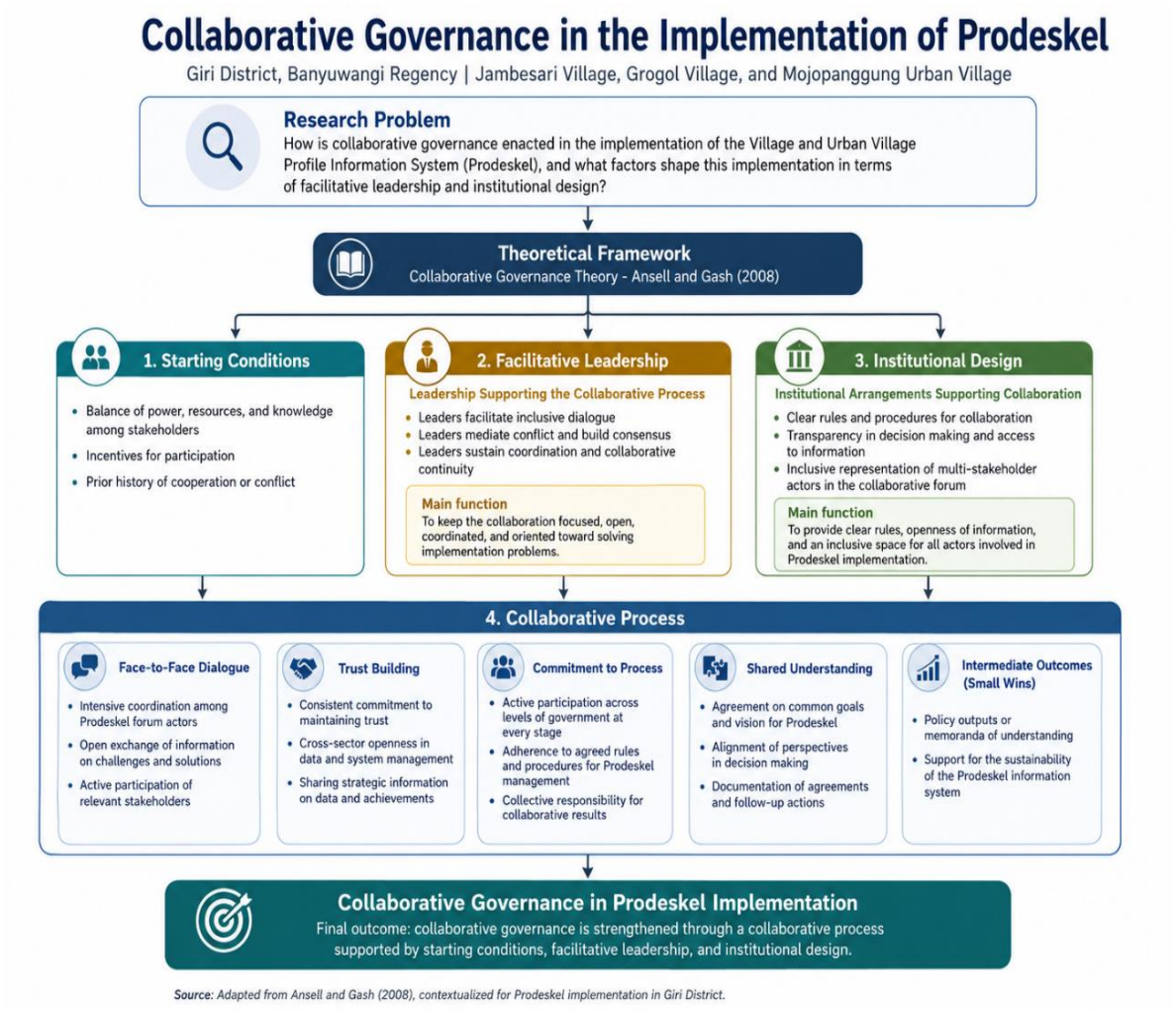

Figure 1. Conceptual Framework of the Study

The research sites were determined as Jambesari Village, Grogol Village, and Mojopanggung Urban Ward in Giri District, Banyuwangi Regency, East Java Province. These locations were selected on the basis of variation in Prodeskel implementation outcomes within the same subdistrict coordination area. According to the Directorate General of Village Government Development, the aggregate achievement of Prodeskel data updating in Banyuwangi Regency in 2025 reached 88.02%; however, implementation in Giri District revealed a considerable disparity between villages and urban wards, where two villages had achieved 100% data updating, while among four urban wards only one had updated its Prodeskel data. In addition, the three loci were selected because they represent varying patterns of implementation within the same administrative coordination system. Jambesari Village and Grogol Village were positioned as examples of relatively successful village government units, as indicated by consistent data updating, the use of Prodeskel as a basis for village development planning, and the active involvement of officials in the processes of data collection, entry, and verification. In contrast, Mojopanggung Urban Ward represents an area facing implementation constraints, such as low intensity of data updating, limited administrative capacity, weak coordination, and insufficient institutional support. Thus, in this study, Prodeskel is understood not only as a digital administrative instrument, but also as a governance arena that reveals how coordination, division of tasks, resource support, and institutional commitment are constructed in the practice of local governance.

Research informants were selected purposively based on their level of involvement, knowledge, and experience in Prodeskel implementation. This strategy is commonly used in

qualitative research because it enables researchers to reach key informants who genuinely understand the phenomenon under investigation (J. W. Creswell & Poth, 2018). The informants comprised representatives from the central government, local government, subdistrict government, village and urban ward governments, as well as village community institutions, including PKK cadres and Karang Taruna members. At the central government level, the informant came from the Directorate General of Village Government Development, Ministry of Home Affairs, namely the Head of the Subdirectorate for the Facilitation of Village Data and Information Management. At the provincial government level, the informant came from the Community and Village Empowerment Office (DPMD) of East Java Province, namely an Associate Expert Functional Officer for Community Self-Reliance Mobilization. At the regency government level, the informant came from the Community and Village Empowerment Office (DPMD) of Banyuwangi Regency, namely the Secretary of the Office. At the supra-village government level, the informant came from Giri District, namely the Subdistrict Head. At the village and urban ward government level, the informants consisted of the Head of Jambesari Village, the Head of Grogol Village, the Head of Mojopanggung Urban Ward, Prodeskel operators, village secretaries, heads of governance affairs, and village facilitators in the research loci. In addition, external actors were also involved, namely village/urban ward community institutions, including RT/RW neighborhood associations, as well as Family Welfare Empowerment (PKK) cadres in the villages and urban ward, because these groups interact directly with the processes of data collection and village information updating.

The selection of these informants was based on the consideration that they were the actors most knowledgeable about the implementation process of Prodeskel, both in terms of policy, administrative coordination, institutional support, and technical execution in the field. By involving informants from various levels of government and local community elements, this study was able to comprehensively capture how the initial conditions of collaboration were formed, how facilitative leadership was exercised, and how institutional design influenced the achievements of Prodeskel implementation (Sugiyono, 2021).

The research data were collected through in-depth interviews, documentation, and observation. In-depth interviews were conducted to explore informants' experiences, perceptions, and assessments regarding collaborative processes, implementation barriers, coordination patterns, and institutional support. Documentation was used to examine regulations, technical guidelines, policy documents, implementation reports, and administrative archives related to Prodeskel. Observation was carried out to directly examine implementation practices and inter-actor interactions in data management. Data analysis in this study employed the interactive model developed by (Miles, Huberman, & Saldaña, 2014), which includes data condensation, data display, and conclusion drawing and verification. This model was selected because it enables the researcher to analyze data systematically from the outset of data collection while maintaining coherence between empirical findings and the theoretical framework of collaborative governance.

In practice, the analysis was conducted by organizing the interview, observation, and documentation data into themes corresponding to the dimensions proposed by Ansell and Gash, namely starting conditions, institutional design, facilitative leadership, and collaborative process. Subsequently, the researcher interpreted the interrelationships among these themes in order to explain the factors affecting Prodeskel implementation in Giri District, Banyuwangi Regency. To ensure data validity, this study employed source triangulation and technique triangulation, namely by comparing information across informants and cross-checking it against relevant documents. Through this approach, the study is expected to produce an in-depth analysis of Prodeskel implementation and to affirm that the success of the village and urban ward information system is strongly influenced by the quality of collaborative governance among stakeholders.

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RESULTS AND DISCUSSION

Starting Conditions

The findings indicate that the implementation of Prodeskel in Giri District, Banyuwangi Regency, was initiated by a shared recognition that village and urban ward profiles are of considerable importance for development planning, reporting, and evaluation. As stated by a central-level informant, "*Prodeskel is positioned as an instrument for providing territorial data that should be utilized hierarchically from the village/urban ward level up to the central government. In fact, the most effective driver is not coercion, but when local governments feel that they need the data themselves. If they perceive it as useful, they will automatically update it diligently*" (Central informant, May 13, 2026). This view was reinforced by the Secretary of the Banyuwangi Community and Village Empowerment Office, who emphasized that *"Prodeskel data are needed to understand village conditions and to support administrative and planning needs in the region"* (Secretary of the Banyuwangi Community and Village Empowerment Office, April 27, 2026). These findings suggest that, normatively, there are sufficiently strong incentives to encourage collaboration in data management. At the same time, the Community and Village Empowerment Office of East Java Province faces an imbalance between its coordination responsibilities and the resources available to support them. As one informant explained, *"We strongly maintain our commitment in terms of supervision and monitoring, but support in the form of resources, budget, direct assistance activities, and specialized Prodeskel technical training remains limited, because Prodeskel has not yet become a priority program in the agency's planning documents"* (East Java provincial informant, May 19, 2026). This condition has also hindered the full communication of Prodeskel's benefits down to the village and urban ward levels.

However, this study also demonstrates that recognition of the importance of data has not been accompanied by an equitable distribution of capacity among actors. A subdistrict informant explained that *"the subdistrict does perform coordination and supervisory functions, but its capacity to ensure the quality of data updating has not yet been supported by adequate resources"* (Subdistrict informant, 28 April 2026). At the village level, the initial conditions varied across the research loci. Jambesari Village had substantive incentives because the data were directly utilized in practice. The Head of Jambesari Village emphasized that *"Prodeskel serves as a basis for evaluation, planning, and sustainable development, and it helps us determine assistance and development programs. The data provide a clear picture of the community's social and economic conditions. Its benefits are therefore immediately tangible. At the same time, however, Prodeskel is often regarded as an additional task amid the heavy administrative workload and the many other applications that must also be managed, so data updating tends to be carried out only when there are instructions or deadlines from higher authorities"* (Head of Jambesari Village, 29 April 2026).

In Grogol Village, community acceptance of the data collection process was relatively positive, yet the expansion of village institutional involvement was influenced by the availability of resources. The Head of Grogol Village stated that *"the more parties are involved, the stronger the validity will be; however, such involvement should be accompanied by some form of contribution, whether in the form of funding, honoraria, or at the very least refreshments"* (Head of Grogol Village, 29 April 2026). Meanwhile, the initial conditions in Mojopanggung Urban Ward were more limited. A Prodeskel operator noted that "*we rely heavily on neighborhood heads (RT/RW), but because of budget constraints, the incentives for RT/RW are minimal and sometimes even unavailable. As a result, their motivation to collect data tends to fluctuate"* (Head of Mojopanggung Urban Ward, 29 April 2026). At the grassroots level, PKK cadres also observed that "*the data collected have not always been translated into tangible programs for families and the community, so the practical value of the data has not yet been fully perceived"* (PKK official of Mojopanggung Urban Ward, 30 April 2026).

These conditions indicate that the initial problem of collaboration in Banyuwangi does not lie in the absence of a need for data, but rather in disparities in capacity, resources, and the intensity of data utilization among actors, as well as in the fact that initial trust has not yet been

institutionalized into a sustainable division of authority and collaborative working mechanisms. This finding is consistent with (Mergel, Edelmann, & Haug, 2019) who argue that digital transformation in the public sector cannot rely solely on the presence of a system, but also requires organizational readiness, implementers' competence, and changes in working practices. In addition, (Vial, 2019) emphasizes that digital transformation is unlikely to produce substantive change when organizational structures, work routines, and resource support do not evolve in alignment with technological design. Thus, the findings of this study suggest that the initial conditions for Prodeskel implementation in Banyuwangi are relatively strong at the normative level, yet not sufficiently mature at the operational level to sustain equitable and enduring data collaboration.

Institutional Design

In the dimension of institutional design, the findings indicate that the implementation of Prodeskel in Banyuwangi has, administratively, established a relatively clear division of roles; however, these arrangements have not yet been institutionalized consistently across all levels of government. As one central-level informant explained, *"villages and urban wards function as data producers, subdistricts play roles in guidance and verification, the regency government acts as the coordinator, while the central government serves as the policy director as well as the user of aggregated data. Formally, what is regulated is indeed the governmental structure, but in practice the involvement of non-government actors has already taken place through the participation of academics as resource persons and reviewers, the Village Consultative Body (BPD) in supervision and validation, PKK cadres and Karang Taruna in data collection, and village facilitators as field-level facilitators"* (Central informant, 13 May 2026; East Java Provincial DPMD, 19 May 2026; Secretary of the Banyuwangi PMD Office, 27 April 2026). Nevertheless, this study found that such a formal framework has not been fully supported by strong operational instruments, such as updated regulations, detailed standard operating procedures, regular cross-sectoral working forums, uniform verification mechanisms, and standardized procedures for data synchronization.

As further explained by the East Java Provincial DPMD, *"although there is a Prodeskel Team at the provincial level, it is not a dedicated unit with its own resources and budget. Multi-stakeholder representation has also not yet been institutionalized, because their structured involvement in the Prodeskel forum has not been optimized"* (East Java Provincial PMD Office, 19 May 2026). In a similar vein, the Secretary of the Banyuwangi PMD Office noted that *"coordination in Prodeskel management is still often carried out through incidental meetings and informal communication, such as messaging groups, rather than through institutional forums operating routinely and in a documented manner"* (Secretary of the Banyuwangi PMD Office, 27 April 2026). At the level of Giri Subdistrict, the weaknesses in institutional design are even more apparent. A subdistrict informant emphasized that "*the quality of data guidance and verification can still vary across areas because not all processes are yet conducted on the basis of uniform technical guidelines. This subdistrict does not have a specific work design for Prodeskel, and special forums are almost never convened because discussion of Prodeskel is merely inserted into general supervisory activities; communication is one-way and seasonal"* (Head of Giri Subdistrict, 28 April 2026). In addition, there is no clearly established formal coordination channel, the subdistrict does not have direct access to the system, and data collection is supported only by Google Drive created on the initiative of the Head of Government Affairs in Subdistrict Giri

At the village level, Jambesari Village indicates a relatively more open institutional design, although it remains insufficiently formalized, and the quality of data updating often depends on the understanding of individual operators. The Secretary of Jambesari Village stated that *"to be honest, we have not yet developed specific internal village SOPs in written and detailed form, so the division of roles still operates on the basis of habit and mutual assistance. However, the village has involved hamlet heads, the Village Consultative Body, PKK cadres, and Karang Taruna. PKK cadres assist with maternal and child health data collection, while Karang Taruna contributes to technical aspects, documentation, and publication, although their involvement is not yet routine and remains*

situational" (Secretary of Jambesari Village, 29 April 2026). In Grogol Village, institutional arrangements function in practice but are not supported by a formal structure. An informant stated that *"there is no specific decree establishing a Prodeskel team. The division of roles operates informally: the operator inputs the data, hamlet heads and cadres collect field data, the village head validates it, and the village secretary accompanies the process"* (Head of Grogol Village, 29 April 2026). A weaker condition was found in Mojopanggung Urban Ward. An informant stated that *"I do not think there is any formal written SOP in place. So, I work more on the basis of routine practice and verbal requests from the subdistrict"* (Prodeskel Operator of Mojopanggung Urban Ward, 29 April 2026). From the perspective of PKK cadres, the weak linkage between data and sectoral programs also reduces the motivation to maintain data quality on a sustained basis, *"coordination is still informal and there is no specific forum for discussing data; communication is more often unofficial and there is no fixed meeting schedule, so information is not distributed evenly; some cadres know, while others do not"* (PKK cadre, Grogol Village, 29 April 2026).

From the perspective of (Ansell & Gash, 2008), effective institutional design must ensure clarity of ground rules, certainty of participation, and interaction procedures capable of sustaining collaboration over time. The findings of this study show that the principal weakness of Prodeskel implementation in Giri Subdistrict, Banyuwangi, within the dimension of institutional design lies not in the absence of a formal structure, but in the limited operational institutionalization of that structure, such that collaboration remains dependent on individual initiative and has not been able to guarantee the sustainability of Prodeskel management. Formal rules and structures are already available at the central, provincial, and regency levels, yet they have not been translated into uniform SOPs, role divisions, coordination channels, evaluation mechanisms, and collaborative forums at the subdistrict, village, and urban ward levels. (Gil-Garcia, Dawes, & Pardo, 2018) argue that smart governance in the public sector requires not merely the presence of technology, but also institutional integration, process interoperability, and cross-organizational coordination. This argument is reinforced by (Scholta, Mertens, Kowalkiewicz, & Becker, 2019) who demonstrate that public digital services and systems will not develop optimally if they continue to be managed through fragmented arrangements and remain heavily dependent on partial procedures. In the context of Prodeskel in Giri Subdistrict, Banyuwangi, this condition is reflected in the absence of standardized mechanisms ensuring that data updating, verification, and utilization proceed consistently across levels of government. Therefore, the institutional design of Prodeskel remains predominantly formal-administrative and has not yet been fully institutionalized as a stable arena for collaborative data governance.

Facilitative Leadership

The findings indicate that facilitative leadership in the implementation of Prodeskel in Giri District, Banyuwangi, has remained more strongly oriented toward enforcing administrative compliance than toward facilitating collaboration. A central-level informant emphasized that *"our position is more that of a facilitator and an enabler. We provide the system, regulations as the legal framework, training, and technical assistance, but execution in the field remains the responsibility of regional and village authorities. In addition, there is a policy-level push to strengthen digitalization and the integration of territorial data*" (Central informant, 13 May 2026). A mediating function was evident when the central government accommodated regional complaints regarding the large number of data variables, addressed these concerns in the preparation of the guidelines, and subsequently simplified the instrument. However, at the local government level, this encouragement has not yet been fully translated into leadership practices that actively build a shared vision, reconcile cross-level needs, and systematically address implementation barriers. The East Java Provincial DPMD and the Secretary of the Banyuwangi PMD Office emphasized that data updating is still heavily influenced by monitoring mechanisms and reporting requirements, indicating that the orientation of leadership remains anchored in administrative compliance (East Java Provincial DPMD, 19 May 2026; Secretary of the Banyuwangi PMD Office, 27 April 2026).

A similar pattern is also evident at the subdistrict and village levels. The subdistrict informant explained that the functions of liaison and supervision are indeed performed, but they operate more frequently within a framework of administrative coordination than within strategic facilitation that encourages mutual learning. The subdistrict informant stated that *"sometimes the subdistrict is said to have a role, but when it comes to actual implementation, it has almost no room to maneuver. As a result, it mainly forwards data requests, provides motivation, and conducts physical supervision without strong technical mentoring capacity"* (Head of Giri Subdistrict, 28 April 2026). The Head of Jambesari Village likewise emphasized that data updating tends to become more intensive when directives or evaluations come from higher levels, rather than because a strong internal commitment has developed to position data as the principal instrument of village planning (Secretary of Jambesari Village, 29 April 2026). From an external perspective, a PKK cadre from Mojopanggung Urban Ward observed that the existing leadership has not yet been fully capable of linking data to the actual needs of families and the community, with the result that the function of data as a basis for social intervention remains limited (PKK Cadre of Mojopanggung Urban Ward, 30 April 2026).

These conditions indicate that leadership in Prodeskel implementation has not yet developed into facilitative leadership capable of transforming administrative coordination into substantive collaboration. (Torfing, Sørensen, & Røiseland, 2019) rgue that the public sector is better able to generate shared value when its leaders are capable of creating arenas for co-creation, mediating differences of interest, and promoting learning across actors. Similarly, (Wirtz, Weyerer, & Geyer, 2019) demonstrate that digital transformation in the public sector requires leadership that not only controls procedures but also directs organizational change, competency development, and the adaptation of work processes. Against this backdrop, the findings from Giri District, Banyuwangi, suggest that leadership remains predominantly reactive and administrative in nature. Accordingly, the challenges of Prodeskel implementation are not merely technical, but also stem from weak strategic mediation among actors.

According to (Ansell & Gash, 2008), facilitative leadership onstitutes a central element in mediating interests, encouraging participation, and maintaining the direction of the collaborative process. The findings of this study show that, in the dimension of facilitative leadership, such leadership has not yet been consistently established across all levels of government in the implementation of Prodeskel in Giri District. The central government has acted as an enabler and mediator, while the provincial government has performed a bridging function and encouraged interregional learning. However, at the regency, subdistrict, village, and urban ward levels, leadership has functioned more as an administrative validator, transmitter of instructions, and reactive problem-solver than as a facilitator of dialogue, builder of consensus, and guardian of collaborative continuity. Jambesari Village represents a relative exception because it possesses a more open deliberative space and a more inclusive leadership style, although this practice still depends on the individual capacity of its leaders and has not yet been fully institutionalized. There remains no leadership figure who consistently promotes open communication, manages differences, provides space for initiative among all actors, and guarantees the sustainability of coordination across levels of government.

Therefore, the principal weakness of this dimension lies in the limited authority for facilitation, the absence of deliberative forums, the low intensity of mentoring, and the persistence of hierarchical leadership patterns. Strengthening facilitative leadership requires leaders who not only ensure administrative compliance, but are also able to connect the interests of different actors, mobilize resources, build consensus, and sustain the collaborative process of Prodeskel over time.

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Collaborative Process

Within the collaborative process dimension, this study examined five variables, namely face-to-face dialogue, trust building, commitment to process, shared understanding, and intermediate outcomes. With regard to face-to-face dialogue, interactions among actors in the implementation of Prodeskel have taken place at every level of government; however, they have not yet developed into regular, egalitarian, and specifically data-focused deliberative forums. The central government provides communication channels through *"National Coordination Meetings held at least twice a year involving provinces, regencies/municipalities, and operators,"* while also conducting direct assistance and supervision in the regions. The Government of East Java Province likewise organizes annual coordination meetings with 38 regencies/municipalities and utilizes WhatsApp groups for daily communication. Nevertheless, the provincial informant acknowledged *that "meetings specifically and intensively devoted to discussing Prodeskel are rare,"* as the issue is usually merged with other agendas. The Banyuwangi Regency DPMD is still evaluating the intensity of coordination so that it does not stop at the regency level, while the Head of Giri Subdistrict stated that *"for Prodeskel data updating, the subdistrict waits for directives from above."*

This pattern reflects the dominance of vertical communication and the limited initiative for coordination at the intermediate level. Variation was also found at the local level. Grogol Village undertakes updating only after receiving instructions from the regency government, whereas Jambesari Village has established relatively more active communication through annual training, Prodeskel groups, and weekly village apparatus meetings. In Mojopanggung Urban Ward, although urban ward deliberation meetings are held every six months, PKK cadres emphasized that *"there is no regular forum specifically devoted to discussing Prodeskel on a periodic basis."* These findings indicate that dialogue has been available in both formal and informal forms, but remains incidental, instruction-oriented, and insufficiently inclusive of villages, urban wards, and community actors in decision-making processes.

In terms of trust building, inter-actor relations have been shaped through transparency of purpose, consistency of monitoring, data validation, and everyday working relationships; however, they have not yet been fully embedded within institutional mechanisms. The central government sought to build trust by clarifying that Prodeskel is "*not intended to judge the quality of regional performance, but rather to support development planning,"* while also accompanying local governments when they encountered errors in data entry. The East Java Provincial DPMD used periodic monitoring as a form of attention and support to regencies/municipalities. The provincial informant stated that trust was developed through *"consistency in monitoring and tracking progress in data updating,"* although direct verification remains constrained by limited resources. The Banyuwangi Regency Government adopted a systemic approach by maintaining a local application already familiar to operators, since imposing a new and untested system was considered likely to reduce implementers' trust. Giri Subdistrict relied more on an interpersonal approach through motivation and field visits; however, its limited authority reduced its capacity to build stronger collaborative relationships. At the local level, trust in Grogol Village rests on acceptance of data collected by hamlet heads and validated by the village head, while Jambesari Village applies a tiered validation process involving the operator, village secretary, and village head. A Jambesari Village informant explained that working relations were functioning well and that the data were also used by Statistics Indonesia, indicating external trust in the results of local data collection. In Mojopanggung Urban Ward, relations between the urban ward administration and PKK cadres as well as RT/RW neighborhood heads were fairly supportive, yet still dependent on informal communication and individual initiative. Thus, trust has become a form of social capital in Prodeskel management, but it remains largely based on personal relationships and acceptance of data outputs rather than on institutionalized collaborative forums, joint verification procedures, and multi-actor accountability.

Regarding commitment to process and shared understanding, the study found a gap between administrative compliance and substantive engagement. The central government

maintains commitment through regulations, circular letters, and dashboard monitoring, but considers that *"the most effective approach is to encourage local governments to feel that they need the data for their own planning purposes."* The Government of East Java Province demonstrated strong commitment through monitoring and progress follow-up, yet acknowledged that budgetary support, direct assistance, and technical guidance remain limited because Prodeskel has not become a top priority. At the regency level, commitment is manifested through the use of the national system to fulfill central government obligations and a local system for regional operational needs. However, Giri Subdistrict implements commitment in a reactive manner because *"there is no active Village/Urban Ward Profile Working Group at the subdistrict level."* At the local level, Mojopanggung Urban Ward updates its data when it receives appeals or reminders, while the operator's workload and limited coordination funds hinder consistency. Grogol Village updates its data annually based on regency instructions, whereas Jambesari Village integrates Prodeskel into weekly village meetings, although the process still depends on a single operator.

Differences also emerged in the understanding of Prodeskel's purpose. The central government has sought to build a shared perception through SAPA DESA webinars, the preparation of the Grand Design of Prodeskel, and dialogue, while the provincial government emphasized that Prodeskel is "*not merely an administrative obligation, but a tool for strategic policymaking."* However, the Head of Giri Subdistrict observed that understanding of Prodeskel's regulatory basis and functions remains uneven, while officials in Mojopanggung Urban Ward interpret it differently according to their respective roles. Grogol Village understands the purpose of Prodeskel, but faces complexity and overlapping variables. Jambesari Village demonstrates relatively more consistent understanding through internal meetings and training, although technical capacity is still unevenly distributed. These conditions confirm that commitment and shared understanding have not yet been formed as a cross-level collective consciousness, but still depend on instructions, individual capacities, and the practical benefits perceived by each actor.

With respect to intermediate outcomes, Prodeskel implementation has produced a data foundation and administrative outputs, but these do not yet fully reflect the collective results of a collaborative process. The central government referred to the achievement of *"the availability of comprehensive village data at the national level,"* which are utilized by Bappenas and other ministries and also serve as one of the variables in Village Fund allocation. The Government of East Java Province uses these data to describe village profiles, determine village development status, and support community empowerment policies. At the Banyuwangi Regency level, Prodeskel data are primarily used to determine village classification and adjust village organizational structures and work procedures. Giri Subdistrict regarded the outcomes achieved as still largely administrative in nature, because village profiles are mainly used as requirements for supervision and specific administrative needs. Mojopanggung Urban Ward produces annual profile documents to support planning and evaluation, but informants acknowledged that field data still contain anomalies. In Grogol Village, the data are used for organizational structuring, planning, and responding to requests from external parties. Jambesari Village likewise has a village profile book in both printed and digital forms and uses the data for administration, deliberative meetings, and assistance programs. Nevertheless, the study did not find any jointly produced policy outputs, collaborative innovations, inter-system integration, or joint evaluation mechanisms that would demonstrate measurable collaborative achievements

According to (Ansell & Gash, 2008), an effective collaborative process requires repeated interaction that generates trust, shared understanding, and long-term commitment. The case of Prodeskel implementation in Giri District shows that the collaborative process remains largely procedural in character. (Mergel et al., 2019) emphasize that digital change in the public sector becomes meaningful only when it is accompanied by changes in interaction patterns, work processes, and organizational values, rather than being confined to administrative digitalization. Similarly, (Vial, 2019) argues that digital transformation requires changes in both structural and relational dimensions, so communication among actors is insufficient if it does not generate deeper learning and more substantive forms of utilization. In the context of Prodeskel in Giri

District, Banyuwangi, communication has indeed taken place, but it has not consistently produced a shared understanding that Prodeskel data should serve as the basis for collective action. At this point, the findings of the study demonstrate that the frequency of coordination does not automatically reflect the depth of collaboration.

Synthesis of Discussion and Implications

Overall, the findings of this study indicate that the implementation of Prodeskel in Giri District, Banyuwangi, is not determined primarily by the mere presence of a digital information system, but rather by the degree of institutionalization of the collaborative governance that underpins it. When the initial conditions of collaboration are not fully equitable and the institutional design remains underdeveloped, facilitative leadership becomes the key mechanism for sustaining collaboration. However, without institutional strengthening, such collaboration tends to remain administrative in nature and does not evolve into sustainable digital governance. Accordingly, the principal challenge of Prodeskel in Banyuwangi lies not in the absence of the system itself, but in the still limited institutionalization of collaboration surrounding that system.

From an academic perspective, these findings suggest that the implementation of local government information systems should be understood not merely as a technological issue, but also as a matter of organizational capacity, leadership, and institutional integration. This finding is consistent with (Gil-Garcia, Zhang, & Puron-Cid, 2016; Mergel et al., 2019; Scholta et al., 2019; Torfing et al., 2019; Vial, 2019; Wirtz et al., 2019) all of whom essentially argue that the success of digital transformation in the public sector is fundamentally shaped by the alignment of technology, governance, leadership, and organizational capability. At the same time, this study offers a more specific perspective, namely that in the context of Prodeskel, the core problem does not lie solely in the low adoption of technology, but rather in the fact that data have not yet been transformed into a living medium of cross-level collaboration that is actively used, maintained, and shared among actors.

From a practical standpoint, the findings underscore the need for simultaneous improvements in several areas. First, the government needs to formulate more detailed and standardized standard operating procedures (SOPs) so that the processes of data entry, verification, updating, and utilization no longer depend on the individual interpretation of each implementer. Second, regular cross-level working forums need to be established so that coordination does not remain limited to incidental communication. Third, the capacity of village, urban ward, and subdistrict officials needs to be strengthened on a continuous basis in order to prevent implementation disparities from further reinforcing hierarchical patterns of interaction. Fourth, leadership at the regency and subdistrict levels needs to be directed toward fostering a shared vision of the importance of data, rather than merely ensuring reporting compliance. Fifth, the involvement of social actors, such as PKK cadres, needs to be strengthened so that data genuinely function as the basis for more accurately targeted social interventions. For future research, comparative studies across regions, actor-network analyses, and investigations into the integration of Prodeskel with other sectoral data systems will be particularly important for deepening understanding of the transformation of local data governance.

CONCLUSION

The implementation of collaborative governance in the management of Prodeskel in Giri District, Banyuwangi, demonstrates variation in collaborative capacity across research loci, with Jambesari Village and Grogol Village exhibiting relatively more functional collaborative practices than Mojopanggung Urban Ward, where individual working patterns and weak coordination still predominate. These findings confirm that the main barriers to Prodeskel implementation are not merely technical in nature, but lie primarily in weak institutional design, suboptimal coordination forums, disparities in resource capacity, and the absence of a fully developed shared understanding among actors. From the perspective of (Ansell & Gash, 2008), these conditions

indicate that the dimensions of starting conditions, institutional design, facilitative leadership, and collaborative process have not yet been adequately fulfilled. As a result, Prodeskel has not functioned optimally as an instrument of accurate and sustainable village and urban ward data governance capable of supporting data-based development planning.

Based on these findings, strengthening Prodeskel implementation requires clearer regulatory delineation of the roles of each actor, the formulation of collaborative SOPs, continuous capacity-building and technical assistance, budgetary support, and improvements in digital infrastructure and more substantive monitoring and evaluation mechanisms, including the refinement of data collection instruments. Theoretically, this study highlights the importance of developing an analytical model that integrates policy implementation with the perspective of digital governance in order to explain more comprehensively the dynamics of managing village and urban ward information systems. The limitation of this study lies in its focus on a limited number of research loci. Therefore, future studies are recommended to expand the analysis comparatively across regions and to examine the relationship between the quality of Prodeskel data and the effectiveness of village development planning.

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