



Administrative Digitalization Development Strategy through the Dukcapil Ceria Mobile Innovation to Enhance Public Service Accessibility in Padang Pariaman

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Abstract. This study analyzes the development strategy for administrative digitalization through the Dukcapil Ceria Mobile innovation to improve public service accessibility at the Population and Civil Registration Office of Padang Pariaman Regency. A descriptive qualitative approach was employed through interviews, observation, and documentation involving managers, officers, information technology personnel, users, and non-users. Data were analyzed through reduction, display, conclusion drawing, and SWOT analysis. The findings show that Dukcapil Ceria Mobile facilitates document submission, reduces face-to-face visits, accelerates service delivery, saves time and costs, and enables applicants to monitor application status. Its development is supported by electronic-based government policies, technological advancement, smartphone use, demand for practical services, and collaboration with village governments. However, implementation remains constrained by limited staff competence and numbers, application disruptions, system maintenance needs, unequal socialization, internet access, low digital literacy, device limitations, preference for conventional services, and data security concerns. The study recommends improving system quality, strengthening staff capacity, expanding outreach and user assistance, enhancing data protection, integrating digital and conventional services, and sustaining collaboration with village governments to ensure inclusive, reliable, secure, and accessible population administration services.

Keywords: Administrative Digitalization; Dukcapil Ceria Mobile; E-Government; Public Service Accessibility; SWOT Analysis.

1. BACKGROUND

The rapid development of digital technology has transformed public administration and government service delivery in many countries, including Indonesia. Digitalization is no longer viewed merely as a technological trend but as a strategic requirement for improving service efficiency, transparency, accountability, and accessibility. Through electronic government, public institutions can simplify administrative procedures, reduce bureaucratic barriers, and provide services that are more responsive to citizens' needs. Indrajit (2002) explains that electronic government refers to the use of information and communication technology to improve governance processes and public service delivery. In this context, government institutions are increasingly required to integrate digital systems into administrative activities so that citizens can access essential services without being limited by distance, time, and conventional office procedures.

The transformation of public services in Indonesia is also supported by the national Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE). The Ministry of Administrative and Bureaucratic Reform emphasizes that digital administration is an important instrument for creating responsive, adaptive, integrated, and

data-based public services (Ministry of Administrative and Bureaucratic Reform, 2023). The implementation of SPBE is directed toward simplifying service procedures, integrating information systems, and strengthening coordination among government institutions. However, successful digital transformation is not solely determined by the availability of applications. It also depends on institutional readiness, human-resource competence, technological infrastructure, information security, and the ability of citizens to use digital services independently.

Digital transformation in population administration is particularly important because population documents are fundamental requirements for education, health care, social assistance, employment, banking, elections, and other public services. Accurate and accessible population administration services therefore have direct implications for citizens' ability to exercise their social and administrative rights. Digitalization can reduce repeated manual processes, minimize data-entry errors, accelerate document verification, and provide citizens with greater flexibility in submitting applications. Nevertheless, the implementation of digital population services must remain inclusive because differences in digital literacy, internet connectivity, device ownership, and geographical conditions may create new barriers for certain community groups.

At the local level, the Population and Civil Registration Office of Padang Pariaman Regency introduced Dukcapil Ceria Mobile in 2019 as an innovation in digital population administration. The application was developed to enable residents to access population services without always visiting the service office. The available services include applications for Family Cards, electronic identity cards, birth certificates, death certificates, Child Identity Cards, population data changes, service-status monitoring, information access, and public complaints. Through this application, residents can submit administrative requests, upload required documents, obtain service information, and monitor the progress of their applications using mobile devices. The innovation is expected to reduce queues, shorten service time, lower transportation costs, and extend public services to residents living far from the Population and Civil Registration Office.

The number of Dukcapil Ceria Mobile users has increased during the last two years. Internal service data indicate that the application had approximately 6,000 active users in 2023 and approximately 8,500 active users in 2024. This increase reflects a growing public response to digital population administration services. However, compared with the population of Padang Pariaman Regency, which exceeds 430,000 people, the number of users remains relatively limited. This condition indicates that the application has not yet reached all segments

of the community, particularly residents with limited access to digital devices, internet networks, service information, and technological skills.

Table 1. Number of Dukcapil Ceria Mobile Users.

Year	Number of Active Users	Development
2023	Approximately 6,000	Initial level of digital service adoption
2024	Approximately 8,500	Increased by approximately 2,500 users

Source: Population and Civil Registration Office of Padang Pariaman Regency, processed by the researcher, 2025.

Although Dukcapil Ceria Mobile offers practical benefits, its implementation continues to face technical and non-technical challenges. From the organizational perspective, limitations include the number and competence of service personnel, unequal adaptation to digital work procedures, application disruptions, system maintenance requirements, and insufficiently extensive public outreach. From the community perspective, the main challenges include unstable internet connections, low digital literacy, limited device ownership, difficulties in uploading documents, and a continued preference for face-to-face services. Data security and personal-information protection also require serious attention because population data are confidential and highly sensitive.

Preliminary observations and interviews indicate that information about Dukcapil Ceria Mobile has not been distributed equally across all nagari and subdistricts. Some residents remain unaware that population documents can be processed through a mobile application because they have not received sufficient information from village or subdistrict governments. Consequently, many residents continue to visit the service office directly even though digital services are available. This situation demonstrates that providing an application does not automatically result in public adoption. Digital services must be supported by continuous communication, practical guidance, user assistance, and collaboration between the Population and Civil Registration Office and nagari governments.

Previous studies have demonstrated the potential benefits of digital population administration. Yuni and Adnan (2022) found that Dukcapil Ceria Mobile provides a more practical alternative for residents in accessing population services. However, its implementation is affected by limited public knowledge, technological ability, and internet access. Ahady et al. (2025) also found that Dukcapil Ceria Mobile improves service efficiency and accessibility by reducing the need for residents to visit the service office. Nevertheless, its adoption is still influenced by digital literacy, communication strategies, technical support, and community readiness. Other studies on digital population services have similarly shown that

applications can reduce queues and simplify administrative processes, but their effectiveness frequently remains constrained by system quality, network disruptions, limited socialization, and unequal user capabilities (Hartatik et al., 2022; Kusuma & Indrayani, 2023).

Despite these contributions, previous studies have generally focused on application implementation, communication strategies, service effectiveness, or community readiness. Limited attention has been given to the formulation of an integrated development strategy that simultaneously considers the application's internal strengths and weaknesses as well as external opportunities and threats. This gap is important because the sustainability of digital public-service innovation depends not only on its current benefits but also on the government's ability to respond strategically to technological, organizational, social, geographical, and security challenges.

Therefore, this study analyzes the development strategy for administrative digitalization through the Dukcapil Ceria Mobile innovation in improving public service accessibility at the Population and Civil Registration Office of Padang Pariaman Regency. Specifically, the study examines the contribution of Dukcapil Ceria Mobile to service accessibility, identifies internal constraints, analyzes external development opportunities, identifies external barriers affecting its utilization, and formulates an appropriate development strategy using SWOT analysis. The findings are expected to provide practical recommendations for improving system quality, strengthening staff capacity, expanding public outreach and assistance, enhancing data security, integrating digital and conventional services, and building sustainable collaboration with nagari governments.

2. THEORETICAL REVIEW

Administrative digitalization refers to the transformation of administrative processes from conventional and paper-based procedures into technology-supported systems. It encompasses electronic data management, document submission, verification, information delivery, service monitoring, and communication between government institutions and citizens. Basyo (2023) emphasizes that digital public services should promote efficiency, accessibility, responsiveness, and procedural simplification. Similarly, Nursin et al. (2023) explain that administrative digitalization can improve service speed, data accuracy, process transparency, and public-service coverage. Nevertheless, the success of digitalization is not determined solely by the availability of applications but also by human-resource competence, technological infrastructure, organizational readiness, digital literacy, and internal-control mechanisms.

Electronic government is defined as the use of information and communication technology by public institutions to improve administrative performance and service delivery. Eom and Lee (2022) argue that digital government transformation requires not only technological adoption but also organizational change, process redesign, and stronger institutional capacity. In public administration, the most relevant form is Government to Citizen, which enables citizens to obtain information, submit applications, upload requirements, monitor service progress, and communicate complaints through digital platforms. However, Hyytinen et al. (2022) emphasize that digital services generate public value only when citizens are aware of, understand, and actively use them. Therefore, service simplicity, system reliability, information clarity, internet availability, and user assistance are important factors in electronic-government implementation.

Public-service innovation refers to the introduction or improvement of service methods, processes, technologies, and institutional practices to provide greater benefits to citizens. Hong et al. (2022) explain that digital innovation in the public sector involves the strategic use of technology to transform government services and respond to changing public expectations. Duygan et al. (2023) identify five characteristics that influence innovation adoption: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage refers to the benefits offered compared with conventional services, while compatibility indicates alignment with user needs and existing conditions. Complexity concerns the level of difficulty experienced by users, whereas trialability and observability relate to opportunities to test the innovation and recognize its results. These characteristics are relevant for evaluating whether Dukcapil Ceria Mobile is beneficial, understandable, accessible, and acceptable to the community.

Digital population administration is the application of information technology to manage population data and deliver services such as Family Cards, electronic identity cards, birth certificates, death certificates, Child Identity Cards, and population-data changes. Hartatik et al. (2022) found that digital population services can simplify administrative procedures and reduce queues, although their implementation is often constrained by limited technological skills and unstable internet connections. Wannery et al. (2023) further state that the quality of digital population services is influenced by accessibility, usability, system compatibility, information clarity, and service reliability. In the context of Padang Pariaman Regency, Dukcapil Ceria Mobile represents an administrative digitalization innovation that enables citizens to submit documents, access information, monitor application status, and communicate with the Population and Civil Registration Office. Previous studies indicate that the application

improves efficiency and accessibility, but its utilization remains influenced by public awareness, digital literacy, internet availability, technical support, organizational capacity, and system stability (Yuni & Adnan, 2022; Ahady et al., 2025).

Public-service accessibility refers to the ability of all citizens to obtain services easily, fairly, and without excessive barriers related to distance, time, cost, technology, or administrative procedures. In digital services, accessibility includes the availability of information, ease of application use, affordability, service flexibility, network access, device ownership, and assistance for vulnerable or digitally excluded groups. Digitalization may expand service coverage by allowing citizens to access government services remotely, but it may also create new inequalities when users lack internet connections, digital skills, or appropriate devices. Therefore, improving accessibility requires an inclusive service model that combines digital platforms with conventional service alternatives, community assistance, continuous socialization, and collaboration with local governments.

The development of Dukcapil Ceria Mobile can be analyzed using SWOT analysis, which identifies internal strengths and weaknesses as well as external opportunities and threats. Strengths may include service convenience, reduced face-to-face interaction, faster processing, cost efficiency, and application-status monitoring. Internal weaknesses may involve limited staff competence, insufficient personnel, application disruptions, maintenance requirements, and uneven socialization. External opportunities include electronic-government policies, technological development, increasing smartphone use, demand for practical services, and collaboration with nagari governments. Meanwhile, external threats include internet disparities, low digital literacy, limited device ownership, preference for conventional services, and data-security risks. The integration of these factors provides a systematic basis for formulating strategies to develop Dukcapil Ceria Mobile as an inclusive, secure, reliable, and sustainable population-administration service.

3. RESEARCH METHODS

Bagian ini memuat rancangan penelitian meliputi disain penelitian, populasi/ sampel penelitian, teknik dan instrumen pengumpulan data, alat analisis data, dan model penelitian yang digunakan. Metode yang sudah umum tidak perlu dituliskan secara rinci, tetapi cukup merujuk ke referensi acuan (misalnya: rumus uji-F, uji-t, dll). Pengujian validitas dan reliabilitas instrumen penelitian tidak perlu dituliskan secara rinci, tetapi cukup dengan mengungkapkan hasil pengujian dan interpretasinya. Keterangan simbol pada model dituliskan dalam kalimat.

4. RESULTS AND DISCUSSION

Advantages of Dukcapil Ceria Mobile in Improving Public Service Accessibility

The findings indicate that Dukcapil Ceria Mobile has improved the accessibility of population administration services in Padang Pariaman Regency. Residents can submit applications, upload supporting documents, obtain service information, and monitor application status without repeatedly visiting the Population and Civil Registration Office. This digital mechanism reduces geographical and temporal barriers, particularly for residents living far from the service office. The most prominent advantage of the application is therefore its ability to bring population administration services closer to the community.

The application also simplifies the process of submitting population documents. Under conventional procedures, residents were required to visit the office to submit physical documents and return when requirements were incomplete. Through Dukcapil Ceria Mobile, supporting documents can be uploaded digitally and reviewed by officers before the application proceeds. When errors or incomplete requirements are identified, the applicant can receive information through the system. This procedure reduces repeated visits and enables residents to prepare the required documents more efficiently.

From the organizational perspective, applications submitted through the system can be examined and classified before applicants arrive at the office. Officers no longer need to re-enter all information from physical forms because the initial data have already been submitted digitally. This arrangement accelerates document verification, reduces repetitive administrative work, and supports more structured application management. The application also helps reduce the number of residents attending service counters, allowing officers to focus on individuals who genuinely require direct assistance.

Residents reported that the application reduced travel time, waiting time, transportation expenses, and the need to queue at the service office. The application-status monitoring feature also provides greater certainty because residents can check whether an application is being processed, requires revision, or has been completed. These benefits demonstrate that Dukcapil Ceria Mobile does not merely transfer conventional services to a digital platform but changes how citizens interact with the government.

These findings support the concept of administrative digitalization, which emphasizes the transformation of manual procedures into more efficient, transparent, and accessible technology-based processes. They are also consistent with the Government to Citizen model of electronic government because Dukcapil Ceria Mobile directly connects the Population and Civil Registration Office with citizens. The findings are in line with Yuni and Adnan (2022),

who found that Dukcapil Ceria Mobile facilitates electronic population administration, and with Hartatik et al. (2022), Herlinda et al. (2023), and Lestari et al. (2024), who found that digital population services can accelerate administrative processes, reduce queues, and minimize direct visits to government offices.

Internal Constraints in Implementing Dukcapil Ceria Mobile

Despite its advantages, the implementation of Dukcapil Ceria Mobile continues to face internal organizational constraints. The first constraint is the unequal digital competence of officers. Application management remains dependent on a limited number of personnel with sufficient technical skills. When application volumes increase or technical problems arise, service delivery may be delayed because not all officers have the same ability to resolve system-related issues.

The limited number of digital-service officers also creates a substantial workload. Officers must process applications submitted through Dukcapil Ceria Mobile while continuing to serve residents who visit the office directly. Digital and conventional services therefore operate simultaneously. This dual responsibility can affect the speed of document examination and service completion, particularly during periods of high demand.

Technical disruptions are another important constraint. The application may become slow, temporarily inaccessible, or unable to process applications properly. Some digitally submitted information must also be re-examined manually because of unclear documents, inconsistencies in population data, or system errors. These conditions reduce the expected efficiency of administrative digitalization and may weaken public confidence in the application. When users experience repeated technical difficulties or receive insufficient information about their applications, they tend to return to conventional services.

System maintenance also requires greater institutional attention. Digital public services need regular monitoring, software updates, security checks, data backups, and clearly defined procedures for responding to disruptions. Without planned maintenance, the application may experience declining performance and recurring errors. The Population and Civil Registration Office must therefore strengthen its technical-management system and ensure that competent personnel are available to resolve problems promptly.

Another internal constraint is the limited scope of socialization and user assistance. Many residents remain unaware of the application or do not understand how to submit documents, upload requirements, and monitor their applications. Although limited digital literacy is an external condition, socialization and assistance are organizational responsibilities. Public outreach should not be limited to informing residents that the application exists. It should

include practical demonstrations, clear guidelines, assistance channels, and information on how users can resolve common difficulties.

These findings confirm that successful electronic government requires more than the provision of an application. It also requires competent human resources, reliable systems, organizational coordination, maintenance mechanisms, and effective communication. The findings are consistent with Wilson and Mergel (2022), who explain that government digital transformation is often constrained by limited organizational capacity, human-resource competence, and change management. They also support Ahady et al. (2025), who emphasize the importance of implementer readiness, communication, socialization, and assistance in expanding the use of Dukcapil Ceria Mobile.

Table 2. Evaluation of Internal Factors of Dukcapil Ceria Mobile.

No.	Internal Factor	Evaluation
1	Online service accessibility	Residents can submit population document applications without visiting the service office, reducing barriers related to distance and time.
2	Time and cost efficiency	The application reduces travel, waiting time, repeated visits, queues, and transportation expenses.
3	Simplified procedures	Applicants can submit data and upload requirements digitally through a more practical service process.
4	Structured application management	Digital submissions assist officers in verifying, classifying, and managing documents before further processing.
5	Application-status monitoring	Residents can monitor the progress of their applications without visiting or repeatedly contacting service officers.
6	Reduced service-counter queues	Digital submissions reduce the number of direct visitors and allow officers to prioritize residents requiring personal assistance.
7	Unequal staff competence	The ability to manage digital services and respond to technical problems is not evenly distributed among officers.
8	Limited digital-service personnel	A small number of officers must manage online applications while conventional services remain operational.
9	Technical disruptions	The application occasionally becomes slow, inaccessible, or unable to process submissions properly.
10	Continued manual examination	Some documents and population data still require manual verification because of errors or unclear uploads.
11	System-maintenance requirements	The application requires routine monitoring, updating, security checks, and rapid disruption-management procedures.
12	Unequal socialization and assistance	Information, practical guidance, and user assistance have not reached all nagari and community groups equally.

External Opportunities for Developing Dukcapil Ceria Mobile

The development of Dukcapil Ceria Mobile is supported by the national policy direction toward an Electronic-Based Government System. This policy provides a legal and institutional foundation for local governments to strengthen digital administration, integrate public-service systems, and improve data-based governance. Digital population administration is therefore not merely an optional innovation but part of a broader government transformation agenda.

Rapid advances in information technology also create opportunities to improve application performance. Technological development can be utilized to simplify the interface, increase processing speed, strengthen data security, automate verification, improve monitoring features, and integrate Dukcapil Ceria Mobile with other government systems. Continuous technological adaptation is important because public expectations and digital-service standards continue to evolve.

The increasing use of smartphones also supports the expansion of the application. Mobile devices have become part of everyday communication, information access, financial transactions, and public-service activities. This development provides a substantial potential user base for mobile population administration services. Nevertheless, increased smartphone ownership should be accompanied by applications that are lightweight, simple, and compatible with devices of varying specifications.

Another opportunity arises from the increasing public demand for fast, convenient, and flexible services. Residents increasingly expect administrative services that can be accessed without long queues, repeated office visits, and complicated procedures. Dukcapil Ceria Mobile responds to these expectations by enabling applications to be submitted from different locations and at more flexible times. This demand can encourage wider adoption when the application consistently provides reliable and understandable services.

Collaboration with subdistrict and nagari governments represents a particularly important development opportunity. Nagari governments are closer to the community and understand local social, geographical, and technological conditions. They can distribute information, provide practical assistance, help residents prepare requirements, and support individuals who cannot use the application independently. Such collaboration can extend digital services to remote areas and community groups that have not been reached through institution-centred socialization.

Nagari governments can also function as intermediaries between the Population and Civil Registration Office and residents. Through service-assistance points at the nagari level, citizens may receive initial guidance before their applications are submitted through Dukcapil Ceria

Mobile. This model strengthens intergovernmental collaboration and creates a more inclusive Government to Citizen service by combining centralized digital processing with locally accessible assistance.

The opportunities identified in this study are consistent with electronic-government theory, which emphasizes the role of policy support, technological development, institutional integration, and user needs in digital transformation. They also reflect the adaptive characteristics of public-service innovation, as explained by Duygan et al. (2023), because successful innovation must respond to environmental change and remain compatible with users' needs.

External Barriers to the Utilization of Dukcapil Ceria Mobile

Unequal internet connectivity is the most significant external barrier to using Dukcapil Ceria Mobile. Several areas in Padang Pariaman Regency experience unstable or insufficient internet connections. Residents in these areas may be unable to open the application, upload documents, or monitor their applications consistently. Consequently, the objective of reducing geographical barriers cannot be fully achieved when the digital infrastructure itself is unevenly distributed.

Differences in digital literacy also affect application utilization. Some residents are familiar with digital platforms, while others experience difficulty understanding menus, completing electronic forms, uploading documents, and responding to application notifications. These differences are influenced by age, educational background, previous technological experience, and everyday patterns of technology use. Smartphone ownership therefore does not automatically mean that residents can independently use digital population services.

Limited device ownership and device capability also restrict access. Some residents do not own smartphones, share devices with other family members, or use devices with limited storage and processing capacity. Applications requiring substantial storage, frequent updates, or high-quality document uploads can create additional barriers. Application development should therefore consider device compatibility and low-bandwidth conditions.

The continued preference for face-to-face services constitutes another external barrier. Some residents feel more confident when they can directly ask officers questions, present physical documents, and receive immediate explanations. This preference becomes stronger when residents have previously experienced system disruptions or uncertain application status. Building trust in digital services therefore requires consistent system performance, understandable information, responsive assistance, and transparent application monitoring.

Data security is also an important public concern because Dukcapil Ceria Mobile processes sensitive personal information and population documents. Although the study found no evidence of data leakage, potential risks must remain a central consideration. Weak data protection could reduce public trust and threaten the sustainability of the service. Appropriate access controls, security monitoring, data-management procedures, and public information regarding document protection are therefore required.

These findings demonstrate that service accessibility cannot be measured only by the availability of an application. A service is genuinely accessible when different community groups can reach, understand, and use it without excessive barriers. The findings support Kusuma and Indrayani (2023), who found that digital literacy influences the use of online population services. They also reinforce Ahady et al. (2025), who identified community readiness, communication, internet access, and technical assistance as important factors in the adoption of Dukcapil Ceria Mobile.

Table 3. Evaluation of External Factors Affecting Dukcapil Ceria Mobile.

No.	External Factor	Evaluation
1	Electronic-Based Government System policy	National digital-government policy provides institutional support for system development and service integration.
2	Technological advancement	New technology creates opportunities to improve speed, usability, automation, integration, and security.
3	Increasing smartphone use	The widespread use of mobile devices expands the potential number of digital-service users.
4	Demand for practical services	Residents increasingly require fast, flexible, transparent, and easily accessible population services.
5	Collaboration with subdistricts and nagari	Local governments can support socialization, digital assistance, requirement preparation, and community outreach.
6	Integration with other government systems	Inter-system integration can reduce repeated data entry and create more coordinated public services.
7	Unequal internet connectivity	Unstable networks restrict access, document uploading, and application-status monitoring in certain areas.
8	Differences in digital literacy	Users possess varying abilities to understand procedures and operate digital-service applications.
9	Limited digital devices	Some residents lack suitable smartphones or use devices with limited technical capacity.
10	Preference for direct services	Some residents continue to trust face-to-face services because they can obtain immediate explanations.
11	Data-security risks	The processing of sensitive population data requires strong protection and transparent security procedures.

Dukcapil Ceria Mobile Development Strategy

The SWOT analysis produced four groups of strategies: Strengths-Opportunities, Weaknesses-Opportunities, Strengths-Threats, and Weaknesses-Threats. The results indicate that the development of Dukcapil Ceria Mobile should not focus exclusively on adding technological features. It must simultaneously strengthen human resources, organizational governance, system maintenance, external collaboration, community assistance, and data protection.

The Strengths-Opportunities strategy focuses on using the application's existing advantages to capitalize on digital-government policies, technological development, smartphone use, and public demand. The available online services, simplified procedures, faster processing, and application-monitoring features can be expanded by adding new types of population services and integrating the application with other government information systems. Cooperation with subdistrict and nagari governments should also be used to broaden the geographic and social reach of digital services.

The Weaknesses-Opportunities strategy uses external support to address internal limitations. Electronic-government policies and technological development can support technical training for officers, the reorganization or addition of digital-service personnel, application improvements, and the automation of verification processes. Collaboration with nagari governments can compensate for the limited reach of institutional socialization by bringing information and assistance closer to citizens.

The Strengths-Threats strategy utilizes the application's benefits to respond to unequal infrastructure and user capability. A simpler interface and clearer procedures can support residents with different levels of digital literacy. The monitoring feature should be optimized to strengthen certainty and public trust. At the same time, digital services should not completely replace direct services. Conventional service channels must remain available for residents facing internet, device, disability, age, or digital-literacy barriers.

The Weaknesses-Threats strategy is directed toward minimizing internal limitations while preventing external risks. The Population and Civil Registration Office should establish a regular system-maintenance schedule, a rapid technical-response mechanism, accessible assistance channels, and periodic service evaluations. Data-security procedures should regulate system access, document storage, data use, disruption management, and institutional

accountability. Maintaining an integrated digital and conventional service model is also necessary to ensure service continuity during network or application disruptions.

Collaboration with nagari governments is a central component of these strategies. Nagari institutions can conduct socialization, organize practical demonstrations, establish assistance points, and help residents prepare digital documents. Such collaboration is especially important for older residents, individuals with limited digital literacy, and communities located far from the Population and Civil Registration Office. By positioning nagari governments as local service partners, administrative digitalization can become more inclusive and responsive to community conditions.

Table 4. SWOT Strategies for Developing Dukcapil Ceria Mobile.

Strategy	Strategic Direction
Strengths-Opportunities	Expand service features by utilizing Electronic-Based Government System policies and technological development; integrate Dukcapil Ceria Mobile with other government systems; improve application-status monitoring; and extend service coverage through cooperation with subdistrict and nagari governments.
Weaknesses-Opportunities	Improve officers' competence through technical training; reorganize or increase digital-service personnel; enhance system stability; reduce manual verification through system integration; and expand socialization and assistance through local-government collaboration.
Strengths-Threats	Simplify the application interface and procedures; use monitoring features to strengthen public trust; reinforce data security through integrated system management; and retain direct services for residents affected by internet, device, or digital-literacy limitations.
Weaknesses-Threats	Establish regular maintenance and technical-disruption procedures; provide accessible user-assistance channels; integrate digital and conventional services; develop data-protection and security-risk procedures; and conduct periodic evaluations of personnel, technology, and community needs.

Overall, Dukcapil Ceria Mobile has contributed positively to population-service accessibility by reducing distance, time, cost, procedural complexity, and service-counter queues. However, these advantages are primarily experienced by residents with adequate internet connectivity, devices, and digital skills. The principal strategic priorities are therefore improving system quality and strengthening user capability. System stability, maintenance, integration, and data security must be developed alongside socialization, digital assistance, staff training, and collaboration with nagari governments. Through this comprehensive approach, Dukcapil Ceria Mobile can develop into a more inclusive, reliable, secure, and sustainable population administration service in Padang Pariaman Regency.

5. CONCLUSIONS

Based on the research findings, Dukcapil Ceria Mobile has contributed positively to improving the accessibility of population administration services in Padang Pariaman Regency. The application enables residents to submit documents remotely, reduces the need for direct visits, simplifies administrative procedures, accelerates verification, decreases queues, saves time and transportation costs, and allows applicants to monitor the progress of their requests. However, these benefits have not been experienced equally by all community groups. Internal constraints include unequal staff competence, limited digital-service personnel, recurring application disruptions, continued manual verification, insufficient system maintenance, and uneven public socialization. External barriers include unstable internet connectivity, low digital literacy, limited device ownership, preference for face-to-face services, and concerns regarding personal-data security.

The development of Dukcapil Ceria Mobile therefore requires an integrated strategy that combines technological improvement, organizational strengthening, and inclusive community assistance. Priority actions include improving system stability and usability, strengthening data protection, providing regular technical training for officers, reorganizing digital-service responsibilities, expanding socialization and practical assistance, and maintaining conventional services for residents facing digital barriers. Collaboration with subdistrict and nagari governments should also be strengthened to extend information and assistance to communities located far from the service office. Through continuous evaluation and the integration of digital and conventional channels, Dukcapil Ceria Mobile can become a more inclusive, reliable, secure, and sustainable population administration service.

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