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# Effectiveness of Implementing Digital Population Identity Applications at the Population and Civil Registration Service of Gorontalo City

Mohamad Zakaria Djafar<sup>1</sup>, Zuchri Abdussamad<sup>2</sup>, Rustam Tohopi<sup>3</sup>

<sup>1</sup> Faculty of Social Sciences, Gorontalo State University, Indonesia, z.djafar04@gmail.com

<sup>2</sup> Faculty of Social Sciences, Gorontalo State University, Indonesia, zuchriabdussamad@yahoo.com

<sup>3</sup> Faculty of Social Sciences, Gorontalo State University, Indonesia, rustam@ung.ac.id

## Article Information

## Abstract

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**Abstract:** This study evaluated the effectiveness of the Digital Population Identity (IKD) application as an effort to improve the quality of public services (speed, efficiency, and transparency) at the Population and Civil Registration Office of Gorontalo City. Using a descriptive qualitative approach with effectiveness parameters covering goal achievement, integration, and adaptation (Duncan), the results showed that the implementation of IKD has not been realized effectively. Indications of ineffectiveness include the level of goal achievement being hindered by low community participation, suboptimal cross-agency integration, and adaptation constraints resulting from limited digital literacy and inadequate technological facilities. Therefore, the study concluded that interventions such as intensified socialization, digital education, and enhanced data security and infrastructure are crucial for optimizing IKD performance.

## Introduction

The origins of e-government services in Indonesia stemmed from changes and developments in government services, initially manual, to electronic or system-based services. The improving government performance demonstrates the effectiveness of public services. This has led to a more positive shift in the behavior and attitudes of government officials, leading to improved public service delivery. The advancement of information technology has transformed people's mindsets and lifestyles for the better.

E-government serves as an electronic-based government tool to make government operations more efficient, transparent, and faster. It facilitates data dissemination to the public. Ideally, e-government aims to improve citizen access to government public services, enhance public access to government information sources, address public complaints, and ensure equal service quality for all citizens.

E-government is an information technology that makes a significant contribution to the delivery of public services in Indonesia. In response to global information technology developments, the Indonesian government is actively creating digital systems to streamline government operations, hoping that this efficiency will continue into the future. Presidential Instruction No. 3 of 2003 has been issued, outlining national policies and strategies for e-government development. This demonstrates the Indonesian government's commitment to

improving the quality of public services through the implementation of e-government. (Safuan Nada Fatmi et al., 2022). One step within the e-government policy framework is the transformation of the Electronic Resident Identity Card (KTP) into a Digital IKD. The IKD is a digital-based form of identity currently being implemented to replace the electronic KTP. This replacement process is being implemented in stages and has not yet been made mandatory for the entire population. Those who already have an e-KTP are permitted to apply for an IKD.

Based on Article 14 of the Minister of Home Affairs Regulation Number 72 of 2022 (Wila & Swalaganata, 2024), the purpose of the IKD is to keep pace with developments in information and communication technology related to population digitization. This is intended to increase the use of population digitization by the public, provide convenience and acceleration in public and private service transactions in digital form, and protect IKD ownership through an authentication system to prevent falsification and data leakage. Meanwhile, the IKD function includes Confirmation of Digital Population Identity ownership involving identity data verification as a step to prove identity. The identity authentication process is carried out through biometric verification, identity data, verification codes, and QR codes as indicators of IKD ownership. In addition, identity authority gives IKD users the freedom to manage their own data access. People who have activated their Digital KTP in the IKD application can also access personal population data and family data in the digital Family Card.

In its implementation, the Digital Population Identity application in Gorontalo City is still less effective. This is because the government has not yet conducted effective socialization regarding the implementation of Digital Population Identity to the public, this causes many people to still be unfamiliar with the application, limited financial capabilities result in not all people having mobile phones and internet packages to support the application. Public concerns regarding data security are also one of the reasons that result in the number of Digital Population Identity activations not being maximized.

## **Method**

Qualitative research is a procedure The procedure used in this study is descriptive research that aims to provide the most detailed and accurate information. The reason the researcher used a qualitative approach was to analyze the effectiveness of the implementation of the digital population identity application at the Population and Civil Registration Office of Gorontalo City. This approach was carried out by digging for information from related parties regarding the extent of the effectiveness of the implementation of the digital population identity application. The effectiveness of the Implementation of the Digital Population Identity Application was reviewed from four indicators: goal achievement, integration, and adaptation. This research was conducted at the Population and Civil Registration Office of Gorontalo City with informants from staff at the Office and a number of residents who had activated and who were not yet aware of the Digital Population Identity. Data collection used observation, interview, and documentation methods while data analysis techniques used data reduction, data presentation, and conclusions.

## Results and Discussion

### 1. Goal Achievement

In Duncan's theory of effectiveness in Siahaan and Pardede, 2022, it is defined as the ability of an organization to maintain good relations, coordination, and cooperation between organizational components, both internal and external, so that program objectives are achieved effectively.

Based on interviews, documentation, and observations, the implementation of Digital Population Identity (IKD) at the Gorontalo City Population and Civil Registration Office (Disdukcapil) is considered ineffective due to various obstacles, despite its aim to improve the efficiency of population administration services. Although IKD is designed to facilitate access to digital services, most people still prefer face-to-face services, which are considered faster, easier, and free from technical constraints. Low digital literacy, limited devices, and limited public understanding lead to low participation, as reflected in the achievement of IKD activation of only 5.43% in 2025, down from 16.27% in 2024 despite an increase in the number of users. This condition indicates challenges in the sustainability of the program and the need to evaluate the socialization strategy, infrastructure readiness, and the effectiveness of public communication. Furthermore, the failure to achieve the national target of 30% IKD activation emphasizes the importance of more educational, inclusive, and sustainable efforts to optimally realize the digitalization of population administration.

The same thing was expressed in the previous study "Implementation of Digital Population Identity in Public Services at the Population and Civil Registration Office of Sumba Regency": For the synergy aspect, the government has not been fully able to ensure that people in remote or underserved areas receive adequate support or understanding of Digital Population Identity (IKD). (Wila & Swalaganata, 2024)

**Table 1. Progress of IKD activation of the Population and Civil Registration Service of Gorontalo City**

No	Region	Code	Dynamic Recording	Number of IKD	IKD Percentage
	Gorontalo City	75.71	146.511	7,957	5.43
1	West City	75.71.01	17.866	729	4.08
2	South City	75.71.02	14.845	741	4.99
3	North City	75.71.03	15.499	951	6.14
4	Dungingi	75.71.04	19.177	1.276	6.65
5	East City	75.71.05	19.389	989	5.10
6	Central City	75.71.06	19.744	1.593	8.07
7	Sipatana	75.71.07	14.121	770	5.45
8	Greater Dumbo	75.71.08	13.810	493	3.57
9	Hulonthalangi	75.71.09	12.060	415	3.44

This finding is consistent with research by Neni Nuraeni and Dedi Syahrudin (2024), which stated that the achievement of service objectives in creating Digital Population Identities (IKD) cannot yet be assessed as fully effective. Although the service has been running and shown positive progress, the expected level of effectiveness both in terms of service quality, processing speed, and program target achievement has yet to be met.

This research is also in line with the findings of Berliana Putri and Oktarizka Reviandani (2023), who stated that the digital KTP or IKD has not reached an optimal level of effectiveness

because it still faces various obstacles, even though the program is an important innovation in supporting the digitalization of population services.

## **2. Integration**

This integration concept can be understood through several theoretical foundations, such as the System Integration Theory which explains the importance of connecting information technology elements to improve the operational efficiency of an organization (Kendall & Kendall, 2014), as well as the Data Integration Theory which emphasizes the process of unifying various heterogeneous data sources into accurate, consistent, and ready-to-use information to support decision making (Wrembel & Koncilia, 2007).

The integration referred to in this research is the achievement of harmony and system connectivity between IKD and various other population services, thus resulting in an easier, faster, and more coordinated service process for the community.

The study results show that the integration of Digital Population Identity (IKD) at the Gorontalo City Population and Civil Registration Office has not been effective. The public still prefers conventional services because they consider IKD complicated and impractical, even though the application has been designed to facilitate access through features integrated with the population administration system. This condition confirms that the availability of technological innovation has not been matched by public acceptance and utilization, thus requiring increased digital literacy and more intensive outreach to optimize IKD implementation.

In line with the findings of Neni Nuraeni and Dede Syahrudin (2024), the procedures for creating Digital Population Identification are in accordance with Home Affairs Ministerial Regulation Number 72 of 2022. However, despite ongoing outreach, there are still obstacles in the form of low public understanding of the IKD activation procedure. This situation indicates that the integration between policy and implementation in the field is not optimal, so more intensive outreach is needed so that IKD services can achieve their intended goals.

Research by Reynalda Wila and Galandaru Swalaganata (2024) also shows that the integration of Digital Population Identity in East Sumba Regency is not yet optimal. Although the IKD has been connected to the population database and socialization is considered adequate, the level of community activation remains very low, only around 1.93%. The effectiveness of integration is also hampered by technical constraints such as limited internet access, uneven smartphone ownership, and disruptions to the Population Administration Information System network. These findings indicate that system integration, connectivity stability, and utilization of digital services are not yet optimal, so the integration of IKD does not meet the effectiveness indicators according to Isbandono's integration theory perspective.

## **3. Adaptation**

Isbandono emphasized that adaptation encompasses not only technical readiness but also behavioral changes, an understanding of digital procedures, and a willingness to accept and utilize technology in public services. This concept aligns with Rogers' (2003) theory of innovation adoption, which assesses that successful technology implementation depends on users' ability to progress through the stages of knowledge, persuasion, decision, implementation, and confirmation.

In addition, the Technology Acceptance Model (TAM) theory developed by Davis (1989) also strengthens the idea that technology acceptance is determined by perceived ease of use and perceived usefulness, both of which are part of the adaptation process.

The adaptation referred to in this study is the ability of Dukcapil and population service officers to face environmental changes, including the use of new technology, updates to the IKD system, operational constraints, and diverse community needs, so that services remain effective, efficient, and responsive.

Field findings indicate that the implementation of Digital Population Identity (IKD) at the Gorontalo City Population and Civil Registration Office (Disdukcapil) has not been effective. The main obstacle lies in infrastructure, both the availability of supporting facilities and the readiness of information technology systems. The outreach strategy is also suboptimal, focusing primarily on online media, while direct outreach to the community remains limited. As a result, information about IKD is not disseminated evenly, especially to communities with limited digital access. This situation underscores the need for infrastructure strengthening and more inclusive outreach to ensure optimal IKD adaptation and implementation.

In line with research by Neni Nuraeni & Dede Syahrudin (2024) on the effectiveness of Digital Population Identity (ID) services at the Cianjur Regency Population and Civil Registration Office, adaptation of the IKD has not been optimal. Although the service is generally considered not yet fully effective, various operational and technical obstacles hinder the program's comprehensive adoption.

In line with research by Hardito Bastian Munte and Gatningsih (2024) on the effectiveness of the Digital Population Identity application at the Karo Regency Population and Civil Registration Office, the adaptation of the Digital Population Identity (IKD) has not been fully effective. The study showed that although the IKD has the potential to improve population administration services, various obstacles remain in its daily operations, including resistance from some Disdukcapil officials, limited digital literacy among the public, and inadequate supporting infrastructure.

## **Conclusion**

Based on the research results, the researcher concluded that the achievement of the objectives of the Digital Population Identity (IKD) application at the Population and Civil Registration Office of Gorontalo City has not been effective. This is indicated by data indicating that the implementation rate of Digital Population Identity (IKD) is still at around 5.43%, far below the target set by the government. The low adoption rate of IKD is caused by several factors, including public perception that the process of using IKD is complicated and impractical, so they prefer to continue using conventional population services. In addition, the lack of adequate socialization and information dissemination also causes the majority of the public to be unaware of the existence and benefits of IKD itself.

Researchers concluded that the integration of Digital Population Identity (IKD) at the Gorontalo City Population and Civil Registration Office (Disdukcapil) has not been effective. The public still prefers conventional services because they consider IKD complicated and impractical, even though the application has been designed to facilitate access through features integrated with the population administration system. This situation indicates that the availability of technological innovation has not been followed by adequate acceptance and utilization. Therefore, increased digital literacy and more optimal outreach are needed to encourage comprehensive IKD implementation.

Researchers concluded that the implementation of Digital Population Identity (IKD) at the Gorontalo City Population and Civil Registration Office (Disdukcapil) has been ineffective. The main obstacle lies in infrastructure, both the availability of supporting facilities and the readiness of information technology systems. Socialization has also been suboptimal, focusing

primarily on online media, while direct outreach to the public remains limited. Consequently, information about IKD is not disseminated evenly, especially to groups with limited digital access. This situation highlights the need for infrastructure strengthening and a more inclusive socialization strategy to ensure optimal adaptation and implementation of IKD.

### Suggestion

Researchers recommend that socialization activities be carried out more massively to increase public understanding of the importance of IKD, so that it can encourage an increase in the number of activations.

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