

# **Spatial Distribution of Digital Population Identity (IKD) Ownership in Sumedang Regency**

Gatiningsih<sup>1</sup>, Anya Risnawati<sup>2</sup>, Muhammad Ilham<sup>3</sup> Anindya Nafis Calyca<sup>4</sup>, Rimdo Munte<sup>5</sup>, Satria Justitia Simanjuntak<sup>6</sup>, M. Pasya Aleandra<sup>7</sup>

1,2,3 Study Program of Population and Civil Registration, Faculty of Community Protection, Institut Pemerintahan Dalam Negeri (Institute of Domestic Governance), Indonesia.

4,5,6,7 Student of the Population and Civil Registration Study Program, Institute of Domestic Governance (Institut Pemerintahan Dalam Negeri), Indonesia.

\*Email: [gatiningsih@ipdn.ac.id](mailto:gatiningsih@ipdn.ac.id)

**Abstract.** The supporting facilities and infrastructure for information and communication technology-based services in Sumedang Regency are very adequate, and the population owns smartphones, reaching 77.5% (Sumedang Regency Statistics Office, 2020). However, the DIGITAL IDENTITY target of 813,120 people has only been achieved by 19,997 people, or 2.46% (Directorate General of Civil Registration, Ministry of Home Affairs, 2023). This researcher is interested in identifying the achievement of the DIGITAL IDENTITY target, the distribution of DIGITAL IDENTITY ownership in each sub-district, and the factors influencing its achievement in Sumedang Regency. The research method used a descriptive qualitative approach with the Diffusion of Innovation theory (Rogers, 2003) with five process stages: knowledge, persuasion, decision, implementation, and confirmation. Data collection techniques included interviews, observation, and documentation, informan Officials of the Population and Civil Registration Service and the Community. Data analysis was conducted using the Miles and Huberman method through data reduction, data presentation, and drawing conclusions. The results of the study indicate that the spatial distribution of IKD activation in Sumedang Regency indicates inequality in achievement between sub-districts, and the diffusion of IKD innovations in Sumedang Regency is not evenly distributed. The three highest sub-districts (over 70%) are Ganeas, Buahdua, and Cisarua. The lowest (40%) are Ujungjaya, Surian, and Wado. Jatinangor is considered a low-income area for higher education. Contributing factors include regional characteristics, the lack of awareness of IKD and its benefits among the public, and digital infrastructure constraints. Increased outreach, strengthening of digital infrastructure, and strengthening of outreach services are needed, as well as the development of a more user-friendly service system so that IKD implementation can be more effective and inclusive.

**Keywords:** Spatial Distribution, Digital Population Identity (IKD) Ownership, Innovation Diffusion, Socialization, Population Administration.

## Introduction

Three trends that are currently developing in the world – Open Government, Digital Government, and the Industrial Revolution – have changed the world order by emphasizing a pattern of digital economy, artificial intelligence, big data, robotics, and so on. This phenomenon is known as **disruptive innovation**, which is an innovation that helps create new markets, disrupts and damages existing markets, and ultimately replaces previous technologies. In this era, the role of **big data** is very significant because it will be used as the basic foundation for the preparation and decision-making in the practice of government administration (Subandowo, 2022).

According to the Global Competitiveness Report 2023, Indonesia's competitiveness is ranked 34th out of 137 countries, which is an improvement from 2022 when it was ranked 44th. This needs to be continuously improved to face the industrial revolution 5.0. Indonesia needs to increase its competitiveness by looking at the global competitiveness index in the fields of higher education and training, science and technology readiness, and innovation and business sophistication.

In the context of increasing the global competitiveness index, one thing that the Indonesian government must pay attention to is maximizing the accuracy and participation of the Civil Registration and Population Administration System. This system serves as a foundation for strengthening government administration and public services to bring happiness to its people, in line with the mandate of Law Number 24 of 2013 concerning Population Administration. In this correlation, the Directorate General of Population and Civil Registration (Ditjen Dukcapil), Ministry of Home Affairs, has made a lot of progress in recent years.

The advancement of information technology has brought significant changes in various aspects of life, including the population administration system. One important innovation that has been introduced by the government is the Digital Population Identity (IKD). This program aims to provide a more efficient, secure, and environmentally friendly solution in managing population data. As part of the national digital transformation, IKD is expected to replace physical documents such as the e-ID card with a digital format that can be accessed via electronic devices. Another factor behind this research is the rapid development of information and communication technology in the current global era. The application of information and communication technology has occurred in all sectors of life, including in the field of population data collection. Not only that, almost all activities for development planning require population data because every development program ultimately aims to improve the welfare of the population. The availability of population data in a digital format is very helpful for every development planning activity.

The era of a digital society in Indonesia is shown by the rapid pace of development in Technology, Information, and Communication (TIC), especially the telecommunications industry, over the last few years. Because of the increasing development of telecommunications, the term "**digital service**" or digital-based services has emerged in every region, including in Sumedang Regency.

The development of internet ownership in the last five years shows a significant increase, both in mobile phone ownership and households that access the internet. The use of the internet in households reached 73.75%, while ownership of computers and landline phones did not experience a significant increase. In 2019, about 18.78% of households owned a computer. This shows an increase in services.

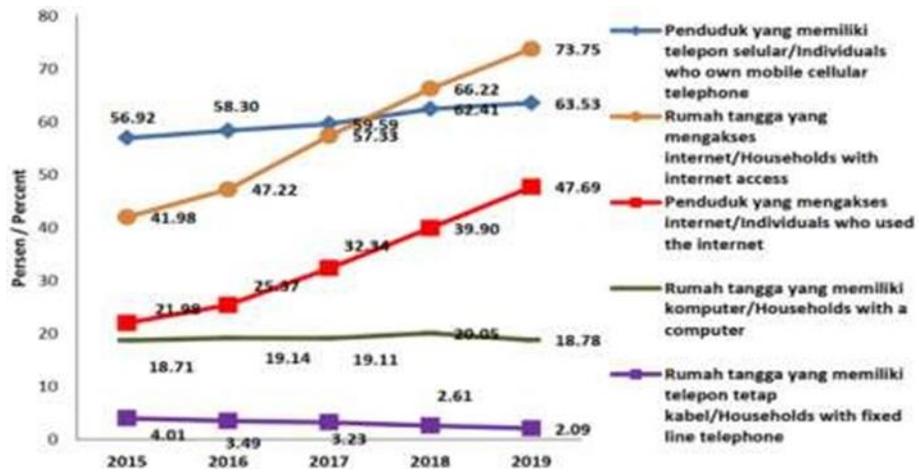


Figure 1. Development of ICT Indicators in Indonesia, 2015-2019  
Source: Indonesian Telecommunication Statistics, 2019



Figure 2. Percentage of Households that Own a Computer, 2012-2019



**Figure 3.** Percentage of Households that Own/Control a Computer vs. Those that Access the Internet in Indonesia, 2015-2019

The use of the internet, the number of households that own and control a computer, the number of households that own a landline telephone, the number of households that own a computer, the number of people who own a mobile phone, and the development of the population that accesses the internet for the entire territory of Indonesia are presented in full in Figures 1.1 to 1.4.

The utilization of the internet or the use of Information and Communication Technology (ICT) in West Java Province is the highest in Indonesia. 80% of villages in West Java have internet access. Similarly, in Sumedang Regency, internet usage increased by 30% in 2024. In fact, based on the results of the East Ventures Digital Competitiveness Index (EV-DCI) research, which calculates digital competitiveness in 157 cities and regencies, Sumedang Regency ranks first in West Java (Figure 1.4).



**Figure 4.** Internet Access Ownership Among Residents in West Java

Source: <https://opendata.jabarprov.go.id/id/infografik/80-persen-desa-di-jawa-barat-sudah-memiliki-akses-internet>

The digitalization of population document services includes online population registration and reporting of demographic events. This means people do not have to come to the Department of Population and Civil Registration office; they can simply report using an online mechanism with information and communication technology connected to the internet. This digital-based service method is very effective and efficient, and with this system, population document services become very optimal.

The condition of supporting facilities and infrastructure for information and communication technology-based services in West Java Province is very adequate, as is the case in Sumedang Regency. If we look at the number of residents who own a mobile phone, it reaches 77.5% (BPS Sumedang Regency, 2020). However, the launch of the Digital ID Card or Digital Population

Identity (IKD) program has not yet gone as expected. The IKD target in Sumedang Regency is 813,120 people who are required to have an ID card, but only 19,997 people (2.46%) have achieved this target in 2023 (Directorate General of Dukcapil, Ministry of Home Affairs, 2023).

**Table 1.** Number of IKD Users in Jabodetabek

Indeks Kota IKD	Penduduk Wajib KTP	Angka Aktivasi IKD
DKI Jakarta	8.374.984	1.272.126
Kabupaten Sumedang	1.833.308	94.146
Kabupaten Bekasi	2.233.680	87.388
Kabupaten Tangerang	2.344.455	81.918
Kabupaten Bogor	3.883.459	36.904
Kota Tangerang	1.377.183	36.147
Kota Depok	1.409.823	31.339
Kota Tangerang Selatan	1.041.427	25.484
Kabupaten Sumedang	813.120	19.997
Jumlah Aktivasi IKD		1.685.549

The Digital Population Identity itself is an innovation program for digital population identity in Indonesia and an effort to improve the quality of population services. This innovation program for digital population identity is a solution to several problems in managing population documents, such as loss, damage, or forgery of documents, which can hinder public access to population services. In addition, the manual process for managing population documents is often time-consuming and inefficient, and there is a lack of accessibility to population services for people in various regions in Indonesia. However, the implementation of the digital population identity program also faces the challenge of a lack of technological understanding among the public, especially among the elderly or people with low digital literacy. Therefore, this research provides an overview of the importance of innovation in improving the quality of public services and providing solutions to the problems faced by the community (Aseng Yulanda, et al., 2023).

Based on data from June 2020, there are 194,332,413 people in Indonesia who are required to have a KTP (ID card). Of that number, 192,468,599 people have completed the electronic KTP (e-KTP) recording process. Overall, the population of Indonesia was 267,289,750 people in December 2019. <https://databoks.katadata.co.id/datapublish/2020/07/02/99-penduduk-telah-melakukan-perekaman-ktp-elektronik>. Of the 194,332,413 people, only 6.850 million (3.5%) have activated it. It is hoped that the IKD will become a digital wallet for the community, making it easier to do things.

In Minister of Home Affairs Regulation No. 72 of 2022, Article 13 paragraph 2, it is stated that IKD is electronic information used to represent Population Documents and feedback data in a digital application through a device that displays personal data in the form of a KTP and KK (Family Card) as the identity of the person concerned. The low ownership of Digital KTP in Sumedang Regency and among the Indonesian people, meanwhile, with the amendment of Law Number 23 of 2006 concerning Population Administration, the proactive system in reporting population administration becomes the responsibility and authority of the government, so the government is proactive in the implementation of population administration. The online population reporting system and population document services, including IKD, as previously explained, can be done anywhere and anytime. With the Minister of Home Affairs Regulation No. 17, of course, there is

uniformity of format, SOPs, infrastructure, information systems, and implementation. In its application, have the e-literacy of the community and officials been supportive? What about the budget? Is the availability of bandwidth supportive? Has optimal socialization been carried out? Have training sessions for officials to support the smooth implementation of the IKD program been conducted properly? These are interesting points for further study.

Along with the public's demand for public services, no exception in population document services that are easy, cheap, fast, accurate, transparent, and accountable as the Dukcapil branding "services are getting easier and safer" must be supported by programs from the implementing agency.

The implementation of digital identity (digital KTP) can save 50-100 billion per year. Digital ID or Digital Population Identity is electronic information used to represent Population Documents and feedback data in a digital application through a device that displays Personal Data as the identity of the person concerned. However, public acceptance of the presence of new technology is often a challenge in its implementation, especially regarding public acceptance and perception. Especially in Sumedang Regency, which is one of the cities with a high urbanization rate and diverse population characteristics, public perception of IKD is an important aspect to study. This perception not only includes understanding and acceptance of technology but also trust, comfort, and the public's readiness to adapt to the digital system.

The data in Table 1.1 places Sumedang Regency as the region with the lowest IKD adoption rate in Jabodetabek, despite having urban characteristics and relatively supportive technological infrastructure. This reflects the challenges faced in encouraging IKD adoption, especially in Sumedang Regency.

It is important to understand the factors that influence the low adoption rate in Sumedang Regency, including public perception of technology, the effectiveness of policy socialization, and the accessibility of digital technology in the region. Various factors, such as education level, access to technology, and public experience with government services, can influence this perception. On the other hand, government policies and socialization about IKD also play an important role in shaping public opinion. Therefore, research is needed to understand how the people of Sumedang Regency view IKD, what obstacles they face, and what potential benefits they feel from the implementation of this system.

This research is expected to provide in-depth insights into public perception of IKD and help the government formulate more effective strategies to encourage the adoption of this system. Thus, the main goal of digital transformation in the population sector can be achieved, namely to create public services that are more inclusive, efficient, and transparent.

Digital Population Identity (IKD) is a digital-based identity that is planned to replace the electronic ID card (e-KTP or KTP-el). Currently, the replacement is gradual, and not all residents are required to do so. However, people who already have an e-KTP are allowed to create an IKD immediately. An explanation of IKD is contained in Minister of Home Affairs Regulation No. 72 of 2022 Concerning Standards and Specifications of Hardware, Software, and Electronic ID Card Blanks and the Implementation of Digital Population Identity, which is stated in Article 13 paragraph 2, namely, it is stated that Digital Population Identity (IKD) is electronic information used to represent Population Documents and feedback data in a digital application through a device that displays Personal Data as the identity of the person concerned. In other words, people will no longer need to bother carrying an ID card because they will have a population identity on their respective mobile phones.

The government, through the Directorate General of Population and Civil Registration (Dukcapil), will implement the Digital Population Identity (IKD) in stages. IKD is a digital version of the identity document that can be accessed online. The implementation of IKD has been carried out since 2022 and continues until 2023. The first stage in 2022 was for ASN (Civil Servants) of the Directorate General of Dukcapil. The 6th stage in 2023 is for the general public and will be intensified in the following years, as stated by the Director General of Adminduk, Mr. Teguh, to Kompas.com, on Monday (11/12/2023). IKD is implemented even if residents already have an e-KTP. This is because the IKD system has features that are considered more complete than the e-KTP. IKD can contain several population documents, such as birth certificates and Family Cards (KK). These features allow residents to get Dukcapil services and are integrated with other public services. In addition, the detailed differences between e-KTP and IKD are quite numerous.

Some of the things that differentiate e-KTP from IKD are that e-KTP is a population identity or ID card. The population document is in a physical form printed with a special blank. Meanwhile, IKD is a complete version of the e-KTP. The IKD contains electronic information used to represent population documents and feedback data in a digital application through a device that displays personal data as the identity of the person concerned.

The Sumedang Regency Regional Government has now started implementing the use of Digital Population Identity (IKD), which can be accessed through each user's mobile phone. The implementation of this IKD is proof of the seriousness of the Sumedang Regency Regional Government in following up on the Circular Letter of the Ministry of Home Affairs of the Republic of Indonesia Number 470/17865/Dukcapil, concerning the implementation of IKD throughout Indonesia.

To accelerate the implementation of IKD in Sumedang Regency, Disdukcapil Sumedang has started providing a door-to-door IKD implementation service to all Regional Apparatus Organizations and sub-districts in Sumedang Regency. The Sumedang Regency Regional Government, through the Department of Population and Civil Registration (Disdukcapil), is now actively conducting door-to-door services to the regions. The door-to-door service carried out by the Sumedang Regency Disdukcapil this time is specifically for the registration of Digital Population Identity (IKD). The hope is that all Sumedang residents will later have their own IKD account.

In 2024, Disdukcapil Sumedang aims to register at least 274,385 IKDs of Sumedang residents. To chase this target, Disdukcapil, through the Population Administration Information Management Division (PIAK), continues to go around to the sub-districts to open door-to-door IKD registration services. The steps of the Department of Population and Civil Registration (Disdukcapil) of Sumedang Regency to accelerate the achievement of the Digital Population Identity (IKD) activation target for compulsory ID card holders have now begun to show results. Until mid-August 2024, Disdukcapil of Sumedang Regency has successfully activated 139,643 IKD for compulsory ID card holders, or about 50.89 percent of the 2024 IKD activation target of 274,385 compulsory ID card holders. In fact, these efforts to accelerate IKD activation services have only been carried out by Disdukcapil Sumedang since May 2023.

As of December 3, 2024, the achievement of Digital Population Identity (IKD) in Sumedang Regency has reached 156,546 people, or about 57.05% of the 2024 target of 274,385 compulsory ID card holders. This IKD activation achievement in Sumedang Regency is ranked first in West Java.

The Sumedang Department of Population and Civil Registration (Disdukcapil) continues to boost IKD services through a door-to-door strategy, such as visiting companies, community centers, and

housing estates. Some sub-districts show significant achievements, such as Ganeas District with 88.42%, Buahdua District with 73.22%, and Cibugel District with 71.55%. Meanwhile, Ujungjaya District has the lowest achievement at 38.30%. Efforts to accelerate IKD activation are also carried out at the village level. For example, Margamekar Village in South Sumedang District has reached 80.49% of IKD activation as of August 23, 2024, through socialization and door-to-door services.

However, challenges are still faced, especially in Sukajaya Village, where IKD activation has only reached 46% of the target. The main obstacle is the limited ownership of Android devices among the elderly, which is a requirement for IKD activation. Disdukcapil Sumedang continues to urge the public to immediately activate IKD to facilitate digital access to population administration services.

Despite the significant progress in the activation of Digital Population Identity (IKD) in Sumedang Regency, several obstacles are still faced in the implementation process. Here are some of the main problems identified:

1. **Technical Constraints** Some villages experience technical obstacles, such as disruptions to the central server, which hinder the IKD activation process. For example, in Mekarjaya Village, IKD activation was stopped due to server disruption that hindered the resident registration process.
2. **Human Resources Limitations** Although Disdukcapil Sumedang has trained operators at the village and sub-district levels to expand IKD activation services, some areas still face a shortage of trained personnel. This can affect the speed and efficiency of services to the community.
3. **Socialization Challenges** The public's lack of understanding about the benefits and procedures for IKD activation is a challenge. Disdukcapil Sumedang has made various socialization efforts, including through the "jemput bola" (door-to-door) program and training for village operators, but there are still challenges in reaching all layers of society.
4. **Infrastructure Limitations** Some areas, especially remote ones, may face infrastructure limitations such as unstable internet access, which can hinder the digital IKD activation process.

Despite facing various challenges, Disdukcapil Sumedang continues to strive to overcome these obstacles through training, infrastructure improvement, and innovative service strategies to ensure all residents can easily access IKD services. Based on the background above, the author is interested in studying the problem further by conducting research titled "Spatial Distribution of Digital Population Identity (IKD) Ownership in Sumedang Regency."

## **Methods**

This research applies a descriptive qualitative method with Rogers' Diffusion of Innovation theory. Five stages were considered: knowledge, persuasion, decision, implementation, and confirmation. Data were collected through interviews, observations, and document reviews. Informants included officials from the Population and Civil Registration Office and community members. Data analysis followed Miles and Huberman's approach: data reduction, display, and conclusion drawing.

1. **Knowledge (Pengetahuan)** The first stage is known as Knowledge. When information is absorbed, it gives birth to a new idea. This needs to be communicated to a person so that the innovation is known and understood. The reason is that when someone truly understands the innovation to be made, they will indirectly more easily become aware of the innovation's existence, its usefulness, and the knowledge that underlies the innovation's function.

2. Persuasion (Persuasi) The second stage is known as the persuasion stage. A person becomes more aware of the innovation so they can make a decision whether to continue with the innovation or abandon it. In addition, this stage also makes a person dig deeper for information about the innovation they are going to make, both regarding its pros and cons, thus giving rise to a good or bad attitude towards the innovation. In this stage, some characteristics are sought: compatibility, complexity, observability, and trialability.
3. Decision (Keputusan) Also known as the decision stage, this is where a person can decide to reject or even accept the innovation. In this stage, there are several factors that influence a person in making a decision. These include needs or feelings, prevailing norms in the social system, previous practices, and innovativeness itself. Of course, these factors have a considerable influence on the final decision.
4. Implementation (Implementasi) The implementation stage is where a person chooses to adopt an innovation. As a result, they will apply it in their daily life. If a person has applied it in their life, that person is known as an adopter of the innovation.

If the previous stages tended to be more about thinking and deciding, this stage is a bit different. In this stage, a person will experience a change in behavior.

5. Confirmation (Konfirmasi) In the confirmation stage, a person will evaluate and strengthen a decision they have made, whether to continue or end it. In this stage, a person will also seek supporting data or information.

## **Results and Discussion**

The findings reveal inequality in IKD activation across sub-districts in Sumedang. Ganeas, Buahdua, and Cisarua achieved over 70%, while Ujungjaya, Surian, and Wado recorded only around 40%. Jatinangor, despite being a higher education area, also shows low adoption. Factors affecting distribution include regional characteristics, public awareness, and infrastructure readiness. Strategies such as outreach campaigns, strengthening digital infrastructure, and mobile services (jemput bola) are essential to improve IKD adoption.

### **Achievement of Digital Population Identity (IKD) Target in Sumedang Regency**

#### **Knowledge**

Digital Population Identity (IKD) is an innovation in population digitalization that aims to simplify the process of population administration services by increasing the use of information and communication technology. It can uniquely and reliably represent an individual within a digital application and can be connected to the physical electronic ID card (e-KTP). The government is currently heavily promoting this to create modern public services that make things easier for the public. In this regard, Sumedang Regency is also very aggressive in providing knowledge about the importance of IKD activation for residents who already have an e-KTP or are in the process of getting one.

Sumedang Regency has a large area with 26 sub-districts and 277 villages, where many people still do not understand the importance of IKD activation. The public understands the need for a physical e-KTP but has a limited understanding of the benefits of IKD. Given the diverse conditions of the community in Sumedang Regency, many people still do not understand and have a lack of awareness about the existence of IKD. Around 2022, the IKD achievement in Sumedang Regency was only 5% nationally. This was because it was the beginning of the launch, and at that time, the service was not as effective as it is now, where activation can be done immediately after e-KTP recording. Instead, people had to wait for the e-KTP to be issued first, which made them reluctant

to deal with IKD. At the beginning of 2023, only about 4,500 residents of Sumedang had an IKD. This was a result of the public's habit of not being accustomed to using digital services. However, in mid-2023, massive socialization began and continues to this day, although many people are still not aware of the benefits or advantages of having activated their IKD. Because they do not understand the usefulness of IKD, the awareness to create or activate it is still low. There are also other reasons, such as not having data plans, feeling that they do not need the application, and even many still ask, "What is IKD for?" This shows that the level of understanding is not yet widespread.

## **Persuasion**

The Department of Population and Civil Registration of Sumedang Regency (Disdukcapil) used an educational and direct approach in distributing its IKD-related services. This was done through socialization activities in sub-districts and villages to provide guidance on the importance of IKD, which contains nine types of services. The approach taken by Disdukcapil Sumedang involved coordinating with village operators to help accelerate IKD activation. This included providing technical guidance for village operators on how to activate IKD to accelerate the IKD service program in Sumedang Regency.

Initially in 2023, after receiving training, village operators were very enthusiastic about operating the IKD system. When they were in high spirits, they helped many people activate their IKD. This wasn't just done officially at their offices; they also invited people to activate their IKD at local shops, community guard posts, hamlets, or even at the homes of neighborhood heads. The neighborhood heads also participated in socializing the importance of IKD, and they once set a record high of 1,500 IKD activations across all sub-districts in Sumedang Regency. Disdukcapil officers actively visited villages and public places (markets, places of worship, sub-district offices) to make it easier for the public to activate their IKD. Because of this achievement, the village operators who activated the most IKD were given a special award.

In addition to approaching village operators, Disdukcapil Sumedang also conducted "Disdukcapil Goes to School" to encourage IKD activation for high school students aged 17. The goal was for them to have a digital identity immediately after their e-KTP recording. The "Goes to Campus" initiative targeted university students, especially job seekers who would need IKD for administrative processes. When they went to campuses, they were usually assisted by student volunteers. Since Disdukcapil's own human resources are limited, the volunteers were given training on how to operate the IKD system before the event began.

Furthermore, there was a "Goes to Factory" program carried out at factories scattered throughout Sumedang Regency, such as Kahatex, Nissin, Garuda Food, Al Ma'sum, and LAN in Sabusu. For example, at Kahatex, which is located on the border with Bandung Regency, not all employees have Sumedang ID cards. Before the socialization was carried out, they would usually ask to be separated based on their ID card's place of residence. This activity collaborated with the West Java Provincial Department of Population and Civil Registration and the Bandung Regency Department of Population and Civil Registration. Through this persuasive approach, a good cooperation was established with the relevant agencies, resulting in the desired number of targets. If there were many people, they would be divided by division, and the process could last up to two days, followed by another division. Similarly, at the LAN training center in Kiara Payung, Disdukcapil Sumedang continued to provide services, even though not all residents were from Sumedang, just like in the factories. By doing this, the acceleration of the IKD target achievement could increase. In 2022, there was still a "sectoral ego," where services were only for people in Sumedang. This is

different from now, where they can provide services to people who are not from Sumedang, but this is not included in the IKD target achievement report.

Disdukcapil Sumedang also provided services to people with disabilities. They did not have to come to the public service center; they could simply send a photo in PDF format via WhatsApp, and it would be processed if the requirements were complete. If the e-KTP was already printed, it could be delivered to the security post, and there would be no need to queue, and it was also free. IKD activation could even be done via video call as long as they were accompanied by someone who had the application, and a photo could be taken through the barcode on the application. There were also cases of migrant workers abroad, in Hong Kong, and even some whose relatives were in Papua, but this kind of assistance could not be given to just anyone to prevent crime.

The persuasive distribution was carried out by Disdukcapil Sumedang by creating a PKS (Cooperation Agreement) with tourism business actors and SKPD (Regional Government Work Units). The PKS made with business actors was aimed at facilitating citizens' access to IKD activation and increasing the coverage of IKD and KIA (Children's Identity Card) ownership. One attractive mechanism was to provide a discount on tourist tickets for citizens who activated their IKD when visiting partner locations. On October 9, 2024, Disdukcapil Sumedang signed a PKS with eight local tourism site managers, namely Jans Park, Cipanas Cileungsing, Kolam Panyindangan, Kampung Karuhun, Menara Kujang Sapasang, Taman Seribu Cahaya, and Balong Geulis.

## **Decision**

The decision to activate IKD (Digital Population Identity) is the result of a process of awareness and an individual's willingness to activate a digital identity as a replacement for or a supplement to the physical ID card. In the context of Sumedang Regency, the public's decision to activate IKD is influenced by various social, technological, and government policy factors.

This decision is not only technical but also social and psychological, and it is heavily determined by the public communication strategies and services of the Disdukcapil (Department of Population and Civil Registration). People decide whether to activate or reject IKD activation. The various efforts made by the Sumedang Regency Disdukcapil range from initial socialization, the introduction of IKD via Android, public education, technical training for village/sub-district operators, the expansion of village and sub-district services, and even a "jemput bola" (door-to-door) service to various agencies and field activities in sub-districts, villages, offices, factories, and schools. This shows that the Sumedang Regency Disdukcapil is very enthusiastic about accelerating the achievement of its target in educating the public about the importance and benefits of IKD because it can make it easier for the public to get public services. However, in the decisions made by the public, some understand what has been conveyed in the education, while others do not.

The people of Sumedang who decide to activate IKD are generally motivated by the ease of access to services (through village/sub-district head operators), intensive socialization, and the clear benefits of using digital services (public service practices, storage of ID card data, etc.). Conversely, those who have not yet activated or choose to postpone activation often face technical obstacles (signal/server), have minimal knowledge, and lack trust in the security of the digital system. There are factors that influence the decision to activate IKD in Sumedang Regency, and almost all sub-districts in Sumedang Regency have the same problems and conditions, namely:

## **Awareness & Knowledge**

- Residents who know the benefits of IKD (e.g., can access population data via their phone) are more likely to activate it.
- Socialization from Disdukcapil through social media, schools, village offices, and public services is very influential.

## **Availability of Facilities**

- Residents who receive direct activation services at village offices, MPP (Public Service Center), or during the "jemput bola" service are more easily able to decide to activate.

## **Technology Support**

- Residents who have an Android phone with a camera and adequate internet are more likely to activate IKD.
- Meanwhile, elderly residents, those who are not tech-savvy, or those who do not have a sophisticated phone face obstacles.

## **Trust in Data Security**

- Some residents are still hesitant because they are afraid their digital data will be leaked. Socialization about system security is an important factor in shaping decisions.

## **Social Environment**

- The example set by community leaders, civil servants, teachers, and village officials influences the decisions of the surrounding residents.

There are at least three reasons why people are reluctant to manage IKD: not everyone has an Android 9 smartphone, people see that not all public institutions, both private and government, accept IKD, and not everyone has an internet data plan to open or access IKD on their respective smartphones.

The decision for IKD Activation, reviewed from the achievement and realization of IKD in Sumedang Regency, is:

1. **In Ganeas District**, residents quickly decided to activate because:
  - There was support from the sub-district head and village officials.
  - Direct services were provided to schools, village offices, and the Mini MPP.
  - There was active information on social media and residents' WhatsApp groups.
2. **Conversely, in Ujungjaya District**, the decision to activate tended to be slow because:
  - Many residents do not have an Android phone.
  - The internet network in some villages is weak.
  - There is a lack of digital literacy.

Looking at the IKD activation decisions above, it shows that some people in Sumedang Regency understand and are aware of IKD, so they are willing to activate it. There are also those who decide not to activate IKD because they do not feel a need for it, as public services from both the government and the private sector still mostly require a photocopy of the e-KTP for important

archives. Lastly, there are people who are enthusiastic about activating but the facilities are not supportive, such as their smartphone and network, so this activation is quite effective in supporting public services.

## **Implementation**

The implementation of IKD in Sumedang Regency has been progressive since 2022, starting with limited education and expanding to the digitalization of services in all villages. Achievements continue to increase, but technical obstacles such as network issues and digital literacy still exist. With the commitment of the regional government and the Disdukcapil, Sumedang has become one of the leading regencies in IKD activation in West Java.

The Digital Population Identity (IKD) Activation Program in Sumedang Regency continues to be intensified to be fully realized in various regions. The steps taken by the Sumedang Regency Department of Population and Civil Registration to accelerate the IKD activation target for compulsory ID card holders have been successful, achieving the highest ranking in West Java for the past three years. This is an achievement that can be imitated by other regions in West Java, where the realized target achievement is 17.3% of the national target of 30%, followed by Pangandaran Regency and Bekasi City with an average achievement of 15%.

The acceleration efforts in IKD activation services by the Sumedang Regency Department of Population and Civil Registration began in May 2023. They developed a strategy by providing training for all sub-district and village operators in the 26 sub-districts and 277 villages/sub-districts in Sumedang Regency. In its implementation, the Sumedang Regency Department of Population and Civil Registration also conducted massive socialization to every sub-district because there are sub-district operators who can provide IKD activation services. To increase the speed of achieving the IKD target, the Sumedang Regency Department of Population and Civil Registration not only involved sub-district operators but also trained village operators, and even neighborhood heads and community unit heads were involved and required to meet the target. Village operators were involved to distribute the importance of IKD, referring to the regulations which state that population administration services also exist at the village level.

The Sumedang Regency Department of Population and Civil Registration makes two reports daily: a direct report to the leadership and a report to the regent submitted by the head of the department, but the numbers have been adjusted according to the Real Without Exception (WTP) standard, which is 58% of the target that has been realized. In Sumedang Regency itself, based on data from the Sumedang Regency Department of Population and Civil Registration, the achievement has reached 80%, meaning that every sub-district has implemented IKD activation activities. However, there is also data from the Population Administration Data Management (PDAK) of the Ministry of Home Affairs of the Republic of Indonesia that there are compulsory ID card holders who have not been accounted for in the percentage. Many elderly people and those who have just received their e-KTP have not yet activated, and also those who do not have a smartphone, which is why the Directorate General of Adminduk has only set a target of 30% because many people do not have smartphones.

The Sumedang Regency Department of Population and Civil Registration gives awards to the sub-districts that have distributed the most and are the most active in IKD activation in 2023 by giving them a trophy at the IKD Award event. Although there was no budget for it, with the help of CSR from BJB and Bank Sumedang, it was given as a form of appreciation and as a way to encourage sub-districts to reach the target. In 2024, the IKD Award was also held, handed over directly by the Regent at the August 17th event, with prizes in the form of a plaque, a trophy, a fan, and an air

cooler. The plan for 2025 is to hold the Adminduk Award, which will be different from 2023 and 2024, where the award will be given to the sub-district that issues the most KIA documents, birth certificates, and death certificates.

The implementation of population document services at the Sumedang Regency Department of Population and Civil Registration is fully carried out at the Public Service Mall (MPP) located at the regional government office and at Sabusu Jatinangor. Any complaints and problems are handled by the department. The Sumedang Regency Department of Population and Civil Registration also has a mini MPP at Sabusu Jatinangor. IKD activation services at the Sabusu MPP are on Wednesdays because the services for each population document are separated by field.

When doing "jemput bola" (door-to-door) services to villages, there are often network problems. The Sumedang Regency Department of Population and Civil Registration creates a network, which is usually provided with internet by the Diskominfo. If there is no network, they often use a personal Wi-Fi hotspot, and most of the time, they use personal data plans. For example, in Cimaningkir village, there is a blind spot. When there is a blind spot, they have a tool like a Wi-Fi repeater to help, but it sometimes does not support the network. The solution is usually to move the location to the nearest village. The blind spot is usually due to a poor network from the central server, and this condition affects the achievement of the IKD activation target.

The implementation of the distribution for IKD activation acceleration is inseparable from the work of the operator officers, both at the sub-district and village levels. The employee status of sub-district operators has changed from being part of the department's staff to being sub-district employees and being paid by the sub-district, whereas they were previously paid by both the department and the sub-district. This also has an impact on the work performed, because when they were still departmental employees, it was easier to coordinate and delegate work, which also affected the IKD activation achievement acceleration activities. Now, the results seem to have dropped significantly. However, based on the results of the Musrenbang (Development Planning Consultation), there is a circular from the Minister of Home Affairs that in 2026, the implementation of IKD will be in the population registration field, which is currently in the PIAK field, because they are very much related. Later, when someone wants to get an e-KTP, after being photographed and recorded, they will immediately be included in IKD activation. There will be two services: having an e-KTP card and IKD activation. If they get their e-KTP recorded first in the population registration field, their IKD is in the SIAK (Population Administration Information System). Previously, when IKD was first available, it took a long time. After being photographed and recorded, they could not activate IKD immediately and had to wait for the e-KTP to be issued before they could activate IKD.

Based on the research results above, the implementation of IKD is very effective, as seen by the efforts developed by the Sumedang Regency Department of Population and Civil Registration, which allowed it to achieve the highest ranking in West Java.

**IKD Confirmation** is the final stage in the IKD activation process, which confirms that a person's digital identity has been successfully created, is active, and can be officially used. This process is very important because it validates that the resident's data is correct and has been stored in the Directorate General of Population and Civil Registration (Ditjen Dukcapil) of the Ministry of Home Affairs' system. The public is given an explanation about IKD and its activation flow:



**Figure 4.** IKD Activation Flow

Source: <https://images.search.yahoo.com/search/images;>

The requirements for creating an IKD are three things: an e-KTP, a smartphone (Android or iOS) with an internet connection, and an active personal email. If these three requirements are met, here are the steps to register for an IKD:

1. Download the Identitas Kependudukan Digital (IKD) application on your phone from the Google Play Store for Android users.
2. Fill in personal data, including NIK, email, and phone number.
3. Click "Verify Data."
4. Verify your face using the Face Recognition feature by clicking the "Take Photo" button.
5. Select "Scan QR code" which you get from the Department of Population and Civil Registration.
6. Check your email for the activation code, then activate IKD.
7. Enter the activation code and captcha.
8. Confirmation is Successful if the data matches, and the application will display a dashboard with all your active digital identity data.

If Confirmation Fails, It Is Usually Due to:

- The face photo not being suitable (poor lighting/camera angle).
- The phone number/email being inactive or entered incorrectly.
- The QR code being expired or scanned incorrectly.
- The central Dukcapil system being overloaded or the network being disrupted.

Once Confirmation is Successful, You Should Notice:

- The IKD dashboard screen appears, containing complete digital identity data.
- The application status becomes "Active."
- It can be used to officially display your digital KTP (e.g., at offices, banks, hospitals, etc.).

If Not Yet Confirmed, You Should:

- Perform the activation in a location with a stable internet connection.
- Ensure the lighting is bright enough when taking the face photo.
- Contact a Dukcapil officer if there is a data synchronization issue.
- Use an active email & phone number to receive the OTP code.

### Public Response and Confirmation in Sumedang Regency

The response and confirmation from the public in Sumedang Regency during IKD socialization and activation events in several villages were as follows:

- In Mekargalih Village, Jatinangor District, dozens of residents enthusiastically visited the village office for IKD activation, with many residents coming daily to register.
- In Margamekar Village, Cimanggung, local activation reached 80.5%. Residents stated that they were helped by being able to access their population data digitally, reducing administrative hassle. In this case, socialization and "jemput bola" (proactive outreach) strategies proved effective.
- Sukadana Village, Cimanggung, even managed to achieve 100% IKD activation for its local target. The village government was cited as the key factor due to intensive education and resident enthusiasm.

### Strategic Role of the Sumedang Department of Population and Civil Registration in Public Confirmation

- Mass socialization to campuses, civil servants (ASN), MSMEs, night markets, and community centers expanded the information network. For example, they approached UPI (Indonesia University of Education) and MSME events, as well as the "ngabuburit" (pre-fast breaking) program in the town square.
- Technical guidance (bimtek) for village/sub-district operators from March–May 2024 allowed residents to activate their IKD directly from the village. This significantly increased the confirmation rate to an active status.
- The "jemput bola" (proactive outreach) strategy by the Disdukcapil (Department of Population and Civil Registration) included visits to companies, schools, institutions, public areas, and village offices. This practice increased public confirmation of IKD activation.

### Public Insights & Feedback from Sumedang Regency

- The availability of activation facilities in villages made it easier for the public to confirm, as they did not have to travel to the regency capital.
- Direct socialization in the community and the "jemput bola" program were very effective, especially in villages with active enthusiasm, such as Sukadana.
- Some obstacles still exist, such as the limited availability of Android phones and internet access in remote villages, which slows down the confirmation rate for some people.

Based on the above, it shows that the public's confirmation of IKD activation in Sumedang is quite positive, especially in villages supported by intensive education, "jemput bola," and local services. The presence of village operators, support from the village government, and direct socialization are key to the high confirmation rate. Meanwhile, at the regency level, as of the end of 2025, 58.80% of citizens with a mandatory KTP have activated their IKD, with the majority having been confirmed as active and efficient.

## Conclusion

The spatial distribution of the Digital Population Identity (IKD) in Sumedang Regency demonstrates a considerable imbalance across sub-districts, with disparities shaped by differences in public awareness, infrastructural capacity, and socio-demographic conditions. The diffusion of this innovation has not spread evenly throughout the regency, but rather reflects the socio-digital characteristics of each region and the level of community participation. The application of Rogers' Diffusion of Innovation theory proves particularly relevant in explaining the patterns of IKD dissemination, as each of its five elements can be observed in the process of adoption.

The persuasion and implementation stages have been notably effective, largely due to the technical guidance (*bimtek*) provided to village operators, which has accelerated the pace of IKD activation. This systematic capacity building has allowed Sumedang to secure the highest ranking in West Java in terms of IKD activation. In addition, the Department of Population and Civil Registration has forged public-private partnerships with both governmental and private institutions, including the tourism sector, as a strategy to attract broader community interest in adopting IKD. The confirmation stage has also been relatively successful, as the community response has generally been positive. Within the community, three groups can be distinguished: those who are already aware and understand the significance of IKD activation, those who remain unaware, and those who demonstrate strong enthusiasm but are hindered by technological limitations, particularly smartphone ownership and network connectivity. In contrast, the knowledge and decision-making stages remain only moderately effective, since many citizens still lack sufficient understanding of IKD despite socialization campaigns, resulting in decisions that do not fully align with the program's expectations.

The unevenness in IKD distribution is most evident in sub-districts with lower activation levels. For example, Ganeas sub-district has achieved an activation rate of 89.65 percent, whereas Ujungjaya records only 40.05 percent. This discrepancy highlights the need for localized, educational, and demand-based approaches, where geographical conditions and community readiness directly determine the success of IKD implementation. In practice, high-performing sub-districts have been used as diffusion models to inspire other areas with lower achievement.

Several factors have been identified as critical to the success of IKD implementation in Sumedang. These include proactive outreach programs known as *jemput bola*, the integration of services within the Public Service Mall, sustained socialization campaigns to enhance public awareness, and technical guidance for village operators to equip them with the necessary skills to perform activation. Accessibility has also been improved by allowing residents to activate IKD at the village office rather than traveling to the central registration office. Furthermore, partnerships with tourism businesses and other regional government agencies have supported the promotion of IKD. Complementary initiatives such as "goes to school," "goes to campus," and "goes to factory" have also expanded outreach to younger generations and the working community.

Moving forward, it is recommended that the Department of Population and Civil Registration in Sumedang continue to consolidate its achievements by expanding innovation. Greater emphasis should be placed on community-based socialization by involving religious leaders, community figures, women's organizations such as *dharmawanita*, and other local actors as agents of diffusion. Outreach efforts should be reinforced through more frequent mobile IKD services, particularly targeting rural or digitally disadvantaged areas. The capacity of village operators should be further enhanced with advanced training to enable them to serve independently and professionally. Incentive mechanisms tied to performance may also be introduced to motivate operators to meet or exceed their activation targets.

Given the persistence of uneven distribution across sub-districts, spatial data analysis should be employed to prioritize areas that have yet to achieve 50 percent activation, with a specific focus on

villages facing digital and socio-cultural barriers. Finally, the overall achievement of IKD targets in Sumedang will depend not only on effective socialization and capacity building but also on sustainable budget allocation and policy support that ensures the continuity of these innovations. Through these measures, the regency can further consolidate its leading position in West Java while simultaneously moving toward more inclusive and effective public services.

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