

The Influence Of Using The SIDOPI GO Website On The Issuance Of Small Unmanned Aircraft Certificates

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Abstract— The Effect of Using the SIDOPI GO website on Issuance Services for Small Unmanned Aircraft Certificates is a quantitative analysis using data taken from the results of distributing questionnaires to small unmanned aircraft users. The data taken is the response of small unmanned aircraft users to the SIDOPI GO website which can assist in the process of applying for the issuance of small unmanned aircraft license certificates in June 2023. Respondents belong to a small unmanned aircraft community called the Indonesian Drone Pilots Association with various types of work, especially in the Jabodetabek region. A systematic literature review was conducted in June 2023 at the Curug Indonesian Aviation Polytechnic using a descriptive analysis study. Descriptive analysis is a research method by collecting data in accordance with the actual data then compiled, processed and analyzed to be able to provide an overview of the existing problems. The purpose of this research is to find out whether the existence of this SIDOPI GO website can make it easier for small unmanned aircraft users to apply for small unmanned aircraft license certificates or also complaints from users if any. for other researchers.

Keywords— Small Unmanned Aircraft; license; Sidopi website

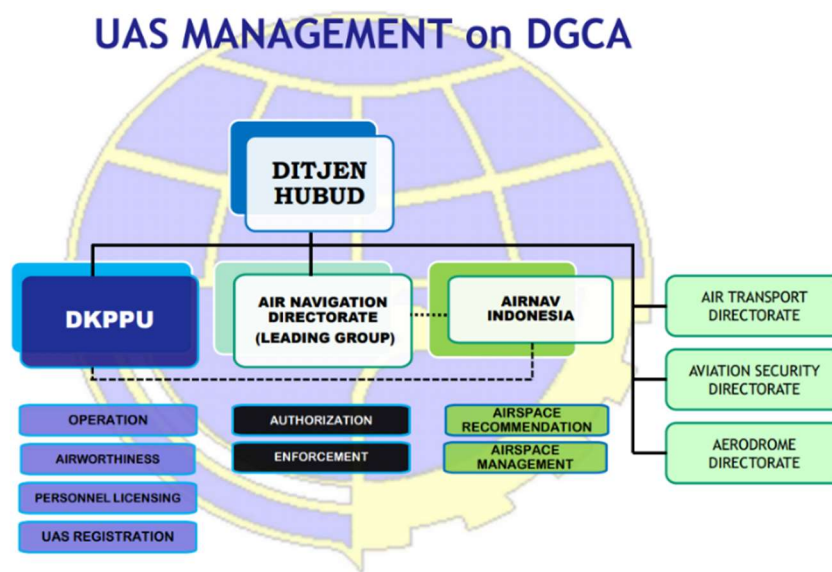
I. INTRODUCTION

The issuance of Minister of Transportation Regulation Number 37 of 2020 concerning the Operation of Unmanned Aircraft (PUTA) is an attempt by the Indonesian government to control the use of small unmanned aircraft, also known as drones. This setting changes dynamically considering the development of the use of drones in the technological era 4.0 is increasingly dynamic [1]. In Indonesia, drones are strictly limited to a maximum altitude of 500 feet if you anticipate venturing beyond this threshold.

It is advised that permission be obtained from the appropriate authorities at least two weeks prior to the planned flight. Drone pilots must have their drones within visual range to ensure safety. Keeping a safe distance from crowds and populated areas is paramount. To ensure adequate safety, the space between you and any clouds should be at least 150 meters (vertically) or 600 meters (horizontally) [2].

Currently, Small Unmanned Aircraft among the public is increasingly widespread due to various factors, relatively new

technology encourages curiosity and becomes a certain trend [3]. An unmanned aircraft is a pilotless aircraft capable of flying autonomously or semi-autonomously with some pilot assistance from a remote station [4]. According to PM 63 of 2021, what is meant by a Small Unmanned Aircraft is a Small Unmanned Aircraft weighing equal to or less than 55 lbs (25 kilograms) including everything on board [5]. The history of the use of drones in non-military fields began in 2006 as quoted from a Wall Street Journal report, the government used them for border surveillance, fire fighting and disaster relief [6]. Due to the high increase in global usage, countries around the world are struggling to incorporate Small Unmanned Aircraft into their aviation regulatory frameworks. This report refers to a literature review and discussion with experts [7]. Besides Indonesia, in America with millions of Small Unmanned Aircraft ownership, the United States Federation of Aviation Administration or FAA continues its development to integrate Small Unmanned Aircraft into the national airspace system [8]. To support the need for issuing certificates, the Ministry of Transportation of the Republic of Indonesia launched a website application called SIDOPI GO, to make it easier for the public to take care of permits to fly unmanned aircraft or drones. Through the SIDOPI website application, the public does not need to come to the office of the Directorate of Airworthiness and Aircraft Operation (DKPPU). Simply press the Drone list menu to register a drone device or Apply for a Drone Pilot License to get a drone flying license.

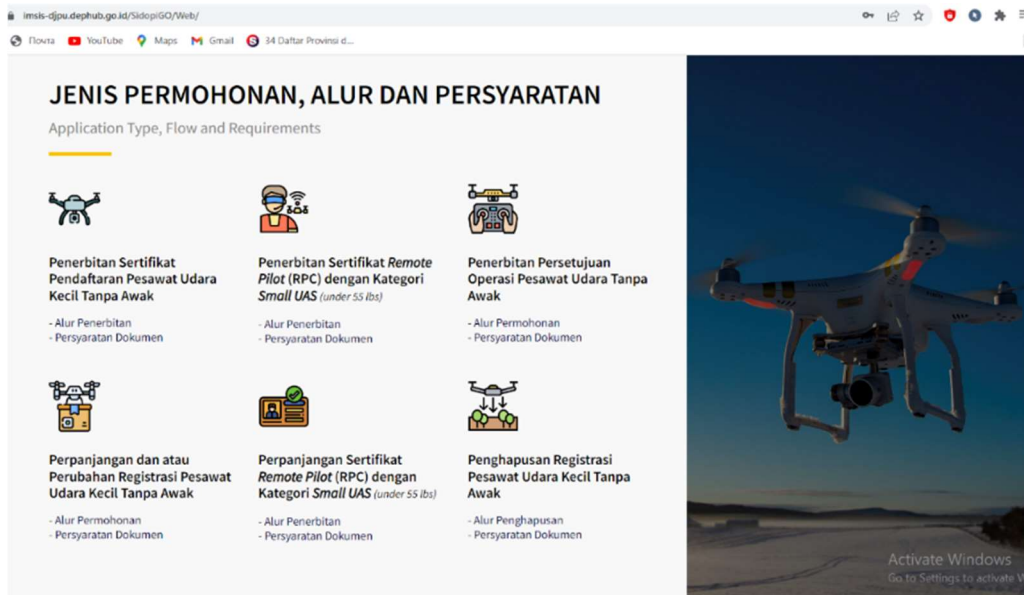


Picture of UAS Management on DGCA [9]

No one can act as a Remote Pilot in Command unless that person has a remote pilot certificate with a Small Unmanned Aircraft system rating issued in accordance with sub-section C of this part of the CASR and meets the requirements [10]. The duration of the Small Unmanned Aircraft registration certificate is valid until the date stated in the certificate and does not exceed 3 calendar years from the date of each issue [10]. Someone who wants to make a small unmanned aircraft license must first certify it at one of the official institutions that have collaborated with DKPPU, namely there are 7 official institutions. One of them is the Indonesian Drone Pilots Association (APDI). APDI is found in almost all provinces in Indonesia. So there is no need to worry about the location of the certification practice, each province has its own region. The test is held every month. After being declared to have passed the theory and practice exams in small unmanned aircraft certification, the next step is to apply for the issuance of a small unmanned aircraft license through the SIDOPI GO website. From the point of view of air traffic service providers and other airspace users, unmanned aircraft have conditions similar to manned aircraft, so personnel licenses, unmanned aircraft equipment must comply with the rules that apply to manned aircraft [11]. In the journal [11] the operation of unmanned aircraft used for research and development, flight training and market research must obtain an inspection certificate in accordance with CASR section 21 and operate in accordance with PKPS provisions section 91, for the purpose of flight testing production of new production aircraft must obtain a special flight permit in accordance with CASR section 21 and operate according to procedures in CASR section 91. Unmanned aircraft for the purposes listed above in CASR section 21 must have a certificate with the type of restricted aircraft.

The implementation of these applications is expected to serve as a role model for the licensing process in Indonesia, especially in the aviation sector. So the applications can help in advancing the sector. The benefits of these applications are not only to assist the flight operators and drone users in Indonesia but also to fulfil the general public’s demand for air transportation services [12].

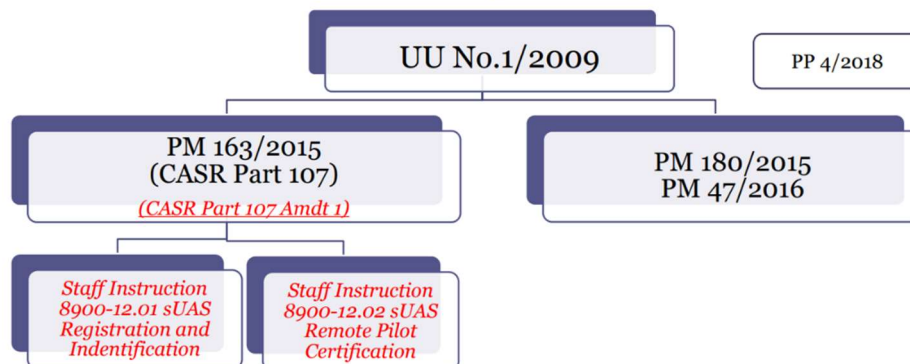
Previously, the Director General of the Ministry of Transportation himself had issued the Indonesian Drone and Drone Pilot Registration System (Sidopi) application. At that time, Sidopi made the aim that the licensing process could be done online for pilots and drones. Meanwhile, the purpose of SIDOPI-GO is not much different from before. Drone owners or users can still register the drone and the pilot. However, there are additional features, namely drone pilots can submit drone operations online, transparent and in real time [13]. Here the author attaches an excerpt from the SIDOPI GO page, which has a simple and elegant appearance so that it is easy for users to understand.



Picture of SIDOPI GO website [14]

This SIDOPI GO website uses Indonesian, the author has not made a choice in English or other foreign languages. But there is also English in some parts as an explanation. Maybe in the future there will be a menu option for language selection, either Indonesian or English.

Indonesian UAS Regulatory framework



Picture of Indonesian UAS regulatory framework [15]

The identification of problem in this study is as follows:

1. What is the impact of using the SIDOPI GO website on the service of issuing small unmanned aircraft licenses?
2. Are there any drawbacks to the SIDOPI GO website that have been experienced by its users so far?

II. LITERATURE REVIEW

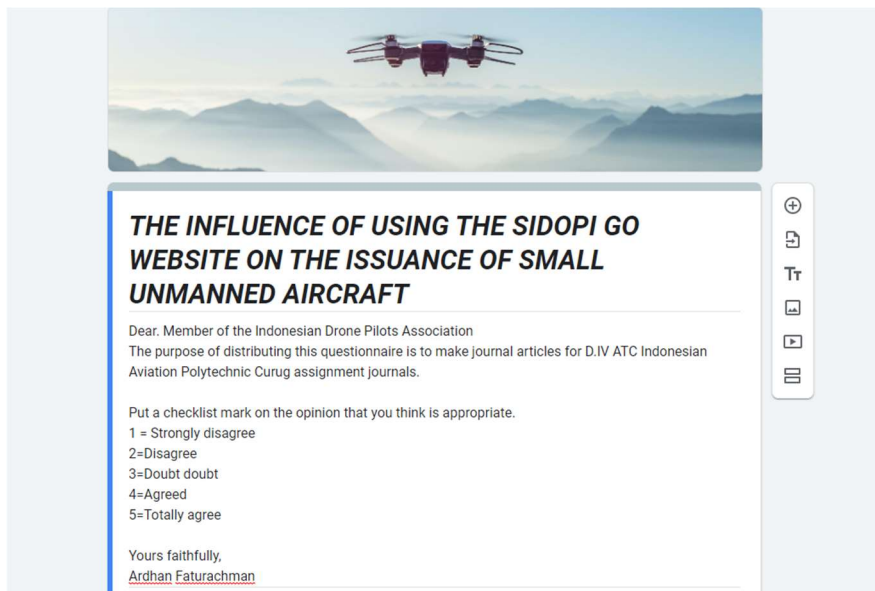
In the journal Legal Aspects of Drone Operation Based on International Air Law and Its Legal Construction in Indonesian Legislation, (Neni Ruhaeni, Nurul Chotidjah, Arinto Nurcahyono, Mutiara Jida Samsudin, 2014) Unmanned aircraft have been widely used for military, non-military purposes. military or commercial and become a public discussion. Referring to the journal Operation of Unmanned Aircraft (Drones) in Indonesian Airspace in terms of Regulation of the Minister of Transportation of the Republic of Indonesia Number 37 of 2020 (Gita et al., 2021), the positive function of using drones in social activities includes as a means of logistics transportation in remote areas difficult to access areas, pipeline mapping, agricultural use, fire suppression and search for missing persons.

III. RESEARCH METHODS

This journal has a qualitative research method, with data collection techniques by distributing questionnaires and literature studies. For data obtained from personal documents, the results of questionnaires from respondents. Questionnaires were distributed to members of the Indonesian Drone Pilots Association (APDI) via the Whatsapp chat group. This questionnaire was distributed with a deadline of 18 June 2023 to 30 June 2023 at 23.59 local time. Where I as a writer is also a member of Asosiasi Pilot Drone Indonesia. The questionnaire was validated by Airnav Indonesia and APDI. in this journal I took the population from the APDI group which totaled 712 people. For the sample using a linear systematic sampling technique, the sample results obtained were 89 people.

$$k = \frac{N}{n}$$

Where k , is the sampling interval , where n is the sample size, and N is the population size [16]. With this formula, it is obtained that 712 is divided by 89 resulting in the number 8, where 712 is the population, 89 is the sample and 8 is the interval.



Picture of Journal questionnaire [17]

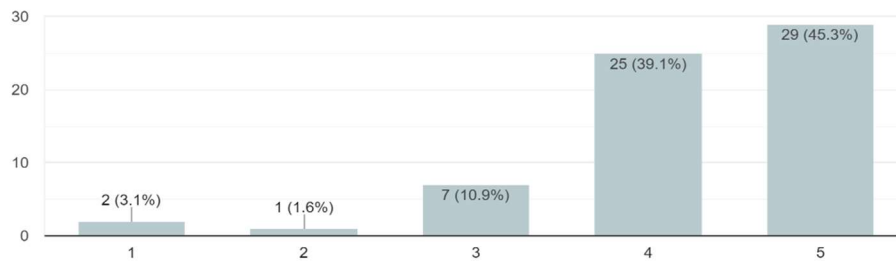
IV. ANALYSIS AND DISCUSSION

This journal uses descriptive statistics analysis method. Descriptive statistics analysis are brief informational coefficients that summarize a given data set, which can be either a representation of the entire population or a sample of a population [18]. In descriptive statistics, it includes, among other things, the presentation of data through tables, graphs, pie charts, pictograms and so on. In this study the authors used a bar chart [19].

Bar charts are a type of graph used to show and compare the quantity of data in different categories. In addition, bar charts can also be used to compare changes in research data over a certain period. Bar charts have the shape of a vertical or horizontal rectangle with the same width. The vertical axis on a bar chart serves to indicate the size or number of numbers of data objects presented. While the horizontal axis on the bar chart shows the name of the data object to be presented in the chart [20].

1). The SIDOPI GO Website User Interface is simple and elegant so that it helps make it easier for users to use the website.

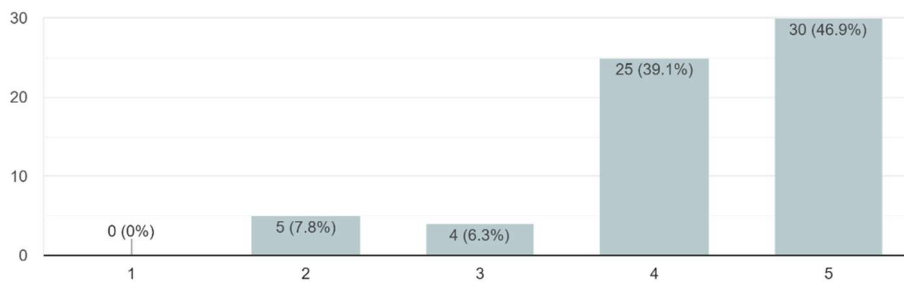
64 responses



From the bar chart presented regarding the user interface of the SIDOPI GO website, 45.3% of respondents voted strongly agree with the elegant and simple user interface of the SIDOPI GO website and the lowest was 1.6% who disagreed with this statement. From these data it can be concluded that the appearance of the SIDOPI Website can be used easily thanks to its simple and elegant appearance.

2). The SIDOPI GO website is easily accessible to the general public.

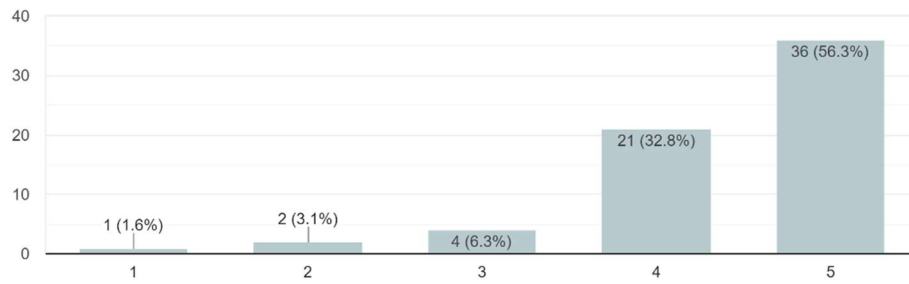
64 responses



From the bar chart presented regarding the ease of accessing the SIDOPI GO website for the general public, 46.9% of respondents chose to strongly agree and as low as 1.6% said they disagreed with this statement. From these data it can be concluded that access from the SIDOPI GO Website can be accessed easily by the general public.

3). The SIDOPI GO website is easily accessible on smartphones, tablets and computers.

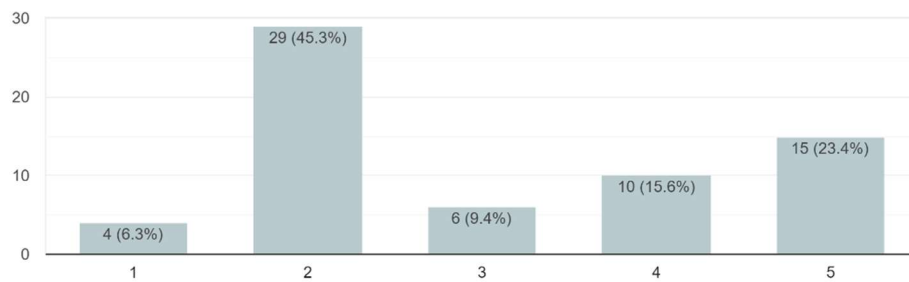
64 responses



From the bar chart presented regarding accessing the SIDOPI GO website on smartphones, tablets and computers, 56.3% of respondents chose to strongly agree and the lowest was 1.6% who strongly disagreed with this statement. From these data it can be concluded that accessing the SIDOPI GO website on smartphones, tablets and computers can be accessed smoothly.

4). There were bug findings encountered while using the SIDOPI GO website.

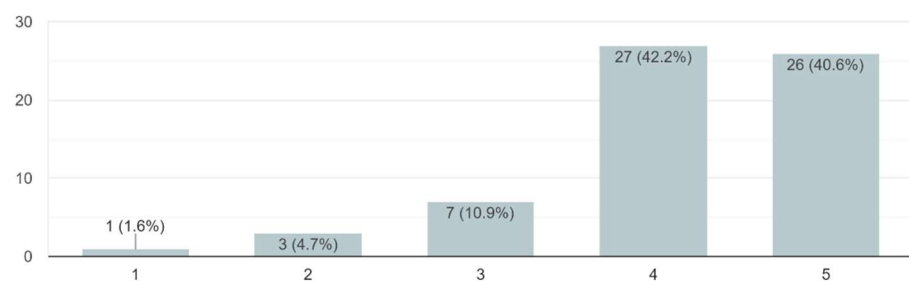
64 responses



From the bar chart presented regarding the presence or discovery of bugs or errors when accessing the SIDOPI GO website, 45.3% of respondents chose to disagree and the lowest of 6.3% stated that they strongly disagreed with this statement. From these data it can be concluded that most of them did not have or did not find bugs or errors when accessing the SIDOPI GO website, but there were some who stated that they had (agreed) with the findings of these bugs, namely as many as 23.4% stated that they strongly agreed.

5). The response from the admin for submitting a drone registration certificate was fairly fast and responsive.

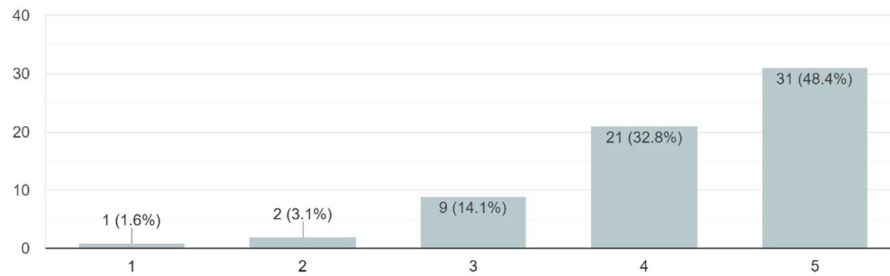
64 responses



From the bar chart presented regarding the response in submitting drone registration from the SIDOPI GO website admin, it is already responsive. As many as 42.2% of respondents chose to agree, 40.6% of respondents chose to strongly agree and as low as 1.6% stated that they strongly disagreed. with this statement. From these data it can be concluded that almost all of the respondents were satisfied with the performance and the replies and responses from the SIDOPI GO website admin in submitting drone registration.

6). The response from the admin for applying for a remote pilot certificate (RPC) license was fast and responsive.

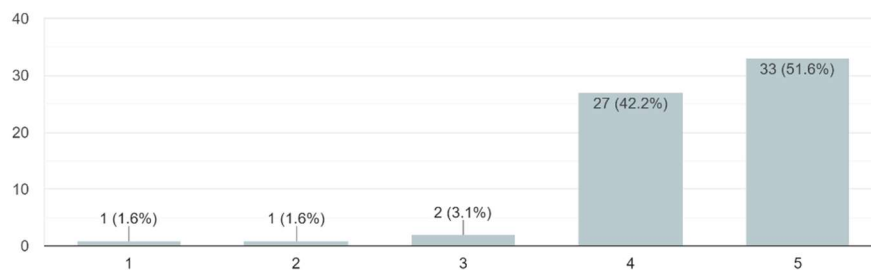
64 responses



From the bar chart presented regarding the response or reply response from the SIDOPI GO website admin in applying the remote pilot certificate, it is already responsive. As many as 48.4% of respondents chose to strongly agree, 32.8% of respondents chose to agree and the lowest was 1.6. % stated that they strongly disagreed with the statement. From these data it can be concluded that almost all of the respondents were satisfied with the response or feedback from the SIDOPI GO website admin in applying the remote pilot certificate.

7). Ease of making a license because there is already a document template required for the license application process.

64 responses



From the bar chart presented regarding the Ease of making a license because there is already a document template required for the license application process on the SIDOPI GO website, 42.2% of respondents chose to agree, 51.6% of respondents chose to strongly agree and the lowest the response stated that 1.6% stated that they strongly disagreed with the statement. From these data it can be concluded that almost all respondents stated that it is easy to make a license because there is already a document template required for the license application process on the SIDOPI GO website.

[21]

V. CONCLUSION

1. The SIDOPI GO Website User Interface is simple and elegant, easily accessible on smartphones, tablets and computers so that it helps make it easier for users to use the website

2. There were hardly found bug findings encountered while using the SIDOPI GO website
3. The response from the admin for submitting a drone registration certificate nor response for applying a remote pilot certificate (RPC) license was fairly fast and responsive then Easy of making a license because there is already a document template required for the license application process.

VI. ACKNOWLEDGMENT

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