UTILIZATION BIG DATA ANALYTICS IN IMPROVING STATE CIVIL APPARATUS PERFORMANCE

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Abstract. *The development of the Industrial Revolution 4.0 has created various forms of technological change. The government sector is one entity affected by this development. Big Data Analytics is a characteristic of the Industrial Revolution 4.0 due to it concerns the distribution of large, diverse, and fast data, so that to do this requires competence in terms of utilizing technology. The State Civil Apparatus, which is the core of the bureaucracy, must be able to face technological developments and utilize the role of Big Data Analytics so that the resulting performance is fast and high quality. The purpose of this study is to analyze the role of big data analytics in the performance of the State Civil Apparatus. This research method is Qualitative with data searches through literature studies by collecting various references from journals, books, and websites. The results of the study show that big data has been used and has a positive impact on strengthening transparency, effectiveness, and public participation. The State Civil Apparatus needs to continue to improve its skills in utilizing big data for decision making and public services so that they become faster and more accurate.*

Keywords*: Big Data Analytics, Performance, State Civil Apparatus.*

1. INTRODUCTION

The development of the current technological era has a great influence on all aspects, including aspects of government, the impact of which can change the work system pattern to achieve fast, good, effective and efficient results, so that this can affect the performance of people involved in the system. (Sadewa & Mahsyar, 2022) . The development of technology and changes in aspects of government also occurred due to one major factor, namely the development of the Industrial Revolution 4.0 where the German economist, Prof. Klaus Schwab, introduced the concept in his book " The Fourth *Industrial Revolution* " which explains that technology is not an exogenous force that we cannot control and must be limited by the choice of accepting or refusing to live with it, but technological change must be seen as a way in reflecting on who we are and how we see the world (Simatupang, 2020).

One form of the development of industry 4.0 is the many industries that have begun to utilize the internet in their activities (Lampropoulos et al., 2019) . *Machine learning,* intelligence artificial intelligence (AI)*,* and *the internet of things* (IOT), are becoming forms a concept that is currently popular in various entities, both private and public, including in terms of AI. which currently many entities and even countries are competing to create and control AI. In fact, Indermit Gill, *The Senior Vice President for Development Economics of the World Bank* stated that any entity or country that masters AI in 2030 will dominate the world until 2100 (Silitonga & Isbah, 2023) .

The importance of utilizing AI has also had an impact on many governments around the world that are ready to take the initiative to increase their spending on AI. According to a 2019 Accenture survey, a majority of 86% of 300 public sector leaders in Europe

stated that they were open to significantly increasing their AI spending in the future. In addition, according to a report by *the International Data Corporation* (IDC) in September, it was reported that global AI consumption in 2022 will reach almost 118 billion USD and will reach 300 USD in 2026. Based on this, the development of AI at this time is to provide opportunities from the effects of the Industrial Revolution 4.0 which will later be used to provide information to the government in terms of policy making, so that the government in terms of performance will be more effective and its impact is useful for maximizing public welfare (Silitonga & Isbah, 2023) .

According to Thalib (2022) technological developments and changes with the Industrial Revolution 4.0 which is marked by The high use of the internet, *machine learning* , AI , and social media is a form of digital transformation. The existence of digital transformation also requires an adaptation process in the strategy towards digital transformation, where the existence of digital transformation in recent years has made systems and organizations able to change work steps and processes amidst the high complexity and uncertainty of the environment. So that organizations that are able to adapt to digital transformation will present several advantages related to digital management in the organization and can produce new performance indicators (Fauzan, 2021) .

Digital transformation due to rapid technological developments ultimately demands individuals to learn and understand the capabilities of their human resources (HR), so that daily performance support can be assisted in its implementation. In terms of HR capability aspects, in the government sector, the implementation of digital transformation also causes changes in organizational work patterns including in its bureaucratic system (Dwi Ismiyana Putri et al., 2023) .

One form of digital transformation implemented in the Indonesian government sector that takes advantage of existing developments from the Industrial Revolution 4.0 and the use of its derivatives such as the *Big Data concept* and the human resource capabilities of the government in implementing it can be seen based on the government's ability to run its technology-based government, in this case it can be seen in terms of the *E-Government Development Index* (*EDGI*), where based on the *EDGI results* in 2020 Indonesia was ranked *88* out of 193 countries and ranked 7 out of 20 ASEAN countries with an *EDGI score* of 0.6612 and at the *High EDGI level* . However, in 2022 there was an increase in the *EDGI score* so that Indonesia was ranked 77 out of 193 countries and rose to fifth place in ASEAN countries below Singapore, Malaysia, Thailand, and Brunei Darussalam with an *EDGI score* of 0.7160. This ultimately explains that digital transformation and the use of the Industrial Revolution 4.0 in terms of electronic-based government still need to be improved (Faedlulloh et al., 2020) .

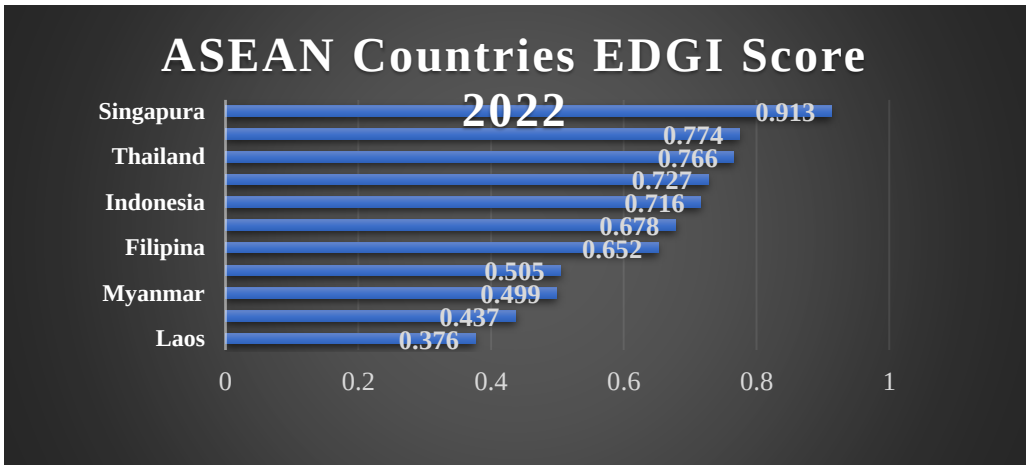

Figure 1. ASEAN EDGI Score 2022
(Source: *Public Institutions and Digital Government of the United Nations)*

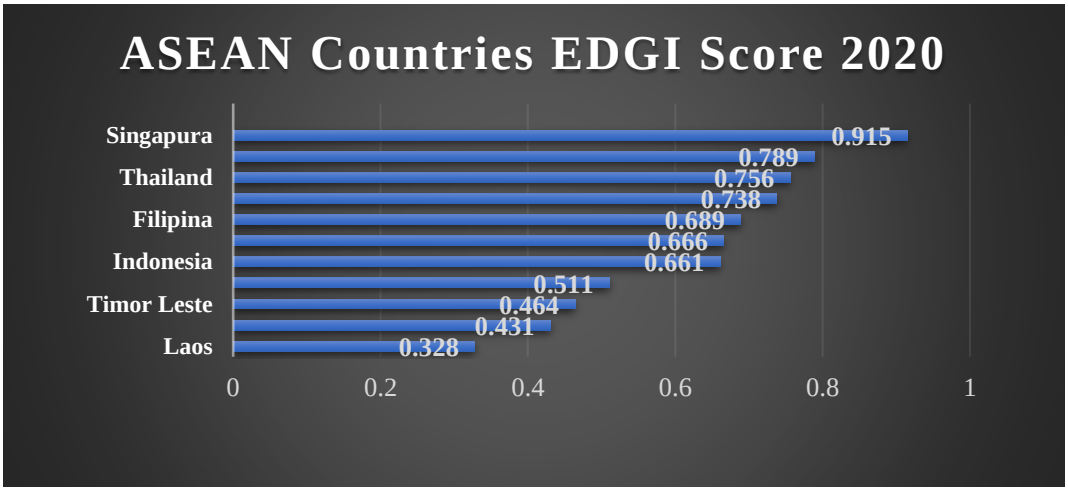

Figure 2. ASEAN EDGI Score 2020
(Source: *Public Institutions and Digital Government of the United Nations)*

Based on the report, as one form of improvement in the level of government digital capabilities and as a form of digital transformation. So, the method that will be done is to create a grand plan carried out by the Joko Widodo Government to carry out bureaucratic reform so that all bureaucratic matters in the future are carried out by AI so that the bureaucracy becomes faster, simpler and less complicated (Mulyana, 2022) .

In realizing bureaucratic reform as planned by the Joko Widodo government, it is inseparable from one problem, namely data (Nalien & Ilham, 2019). There is a lot of government data that is not integrated, causing chaos in decision-making (Chikomba, 2024). So, to overcome this through efforts to utilize technological advances, especially the application of *Big Data*, then the concept of One Data or One Data Indonesia was created. The idea regarding One Data Indonesia started from the president 's concerns about the difficulty of obtaining correct data when needed by the government in carrying out formulation strategic public policy (Manshur, 2021) .

Based on these problems, four possibilities emerge, namely: 1) the required data is indeed not available in ministries/institutions and regional agencies; 2) there are several versions of data for the same data object in several ministries/institutions and regional agencies, which collide and negotiate with each other; 3) the available data is of questionable validity and quality related to the rules for its preparation and the regularity of its updating, making it rather difficult and dilemmatic as a basis for decision making; 4) the available data cannot be mutually accessed and used between ministries/institutions or between the central government and regional governments (Manshur, 2021) .

Of course, the four possibilities above cannot be separated from the performance capabilities of the apparatus in producing/generating data for the benefit of government decision-making (Mano, 2007). So that the apparatus in various government agencies are busy producing data without ever questioning whether the rules for compiling it are correct or not so that it is valid to be used as material in decision-making. Impact if the quality and validity of the data is low then " *garbage in garbage* out " arises have fatal impact to policies and planning that have been made with the data that produces bad and low-quality policies and planning, so that the results are detrimental to the country and the people. Based on the above, it is a reason that strengthens the government to carry out bureaucratic reform. (Yasa et al., 2021) .

The bureaucratic reform carried out by the Joko Widodo government cannot be separated from the existence of Presidential Regulation Number 81 of 2010 concerning *Grand Design of* Bureaucratic Reform 2010-2025 which provides direction for the formulation bureaucratic reform policy (Juliani et al., 2018) . One of the targets in bureaucratic reform is the development of state apparatus which aims to increase the

professionalism of state apparatus in creating good governance (Tasi, 2022). In realizing bureaucratic reform, especially in terms of making civil servants capable of implementing technological developments, the government needs to focus on strengthening bureaucratic capacity to become a world-class government, one of which is through ASN competency in digitalization.

State Civil Apparatus (ASN) competence in implementing digital transformation in *e-government* cannot be separated from Presidential Decree Number 95 of 2018 regarding the Electronic - Based Government System (SPBE), by emphasizing changes that not only focus on the government system, but also digital transformation, both from system to human resources apparatus. The quality and competence of ASN in implementing SPBE policies is a supporting factor for digital transformation to support the implementation of SPBE (Firdaus et al., 2021) . This is because ASN has a big role in taking and determining the course and success of the system in realizing good service. So to create this success, ASN in terms of ability and competence needs to be developed through digital literacy (Kamaly et al., 2024).

Improving the capabilities and competencies of ASN in digital literacy needs to be done, because digital literacy in ASN in Indonesia is considered to still be at a low level, where currently many ASN are rigid and have not fluent in managing and utilizing technology to support government performance. So ASN needs to be equipped with insight into digital developments including introduction and understanding of concepts such as *Big Data, Machine Learning,* AI*,* and *the Internet of Things* so that ASN's insight becomes open and the implementation of bureaucratic reform can run well, so that later it can create a quality civil servant who is literate in digital technology (Gumanti, 2023) .

On the other hand, besides the planned bureaucratic reform, the government is also intensively introducing and campaigning for *Smart* ASN as a new concept and value that needs to be internalized for human resources (HR) in the Indonesian bureaucracy (Sya'baniah et al., 2024). Smart ASN which is a concept for HR is a terminology in describing the profile of ASN which has characteristics, behaviors and competencies including integrity, professionalism, mastery of Information and Communication Technology, mastery of foreign languages, has a friendly spirit, *has* entrepreneurial spirit and mastering *networking*. Thus, *Smart* ASN has a profile that is prepared to face rapid changes and increasingly complex world challenges (Khaeromah et al., 2021) .

The existence of *Smart* ASN is also built in line with the priority of human resource development and design the main national bureaucratic reform. In addition, *Smart ASN is a* hope amidst the ineffective conditions of the Indonesian bureaucracy, thus creating optimism built by the government in motivating ASN to be able to adapt to global external changes in the bureaucratic environment that are happening so quickly (Faedlulloh et al., 2020) .

Thus, in an optimal ASN management implementation, where the potential of increasingly sophisticated digital technology can encourage better ASN staffing. So digitalization which includes the terms *AI* and *Big Data Analytics* becomes an important role in helping and improving ASN performance, so that the quality of ASN performance results is achieved, and its implications have an impact on the patterns and policies that are made to be of quality (Syaidaturohmah, 2022) .

Based on the background of the problem, this research has the formulation of the problem is how *big data analytics* utilized *in the performance* of the state civil apparatus? How *big data analytics* plays a role in significance improvement productivity ASN performance? This research also aims to analyze the benefits *big data analytics* in the performance of state civil servants and analyzing significant role *big data analytics* in improvement productivity ASN performance. This research is also expected to contribute in providing some information on how far *big data analytics* plays a role in ASN performance, and how ASN must face and carry out tasks in making its policies based on the concept of *big data analytics* that is currently being implemented in order to realize the bureaucratic reform that is being built by the government.

2. LITERATURE REVIEW

2.1 Big Data Analytics

According to *UN Global* (Pulse, 2012) define *big* data as a volume of data structured and unstructured data types, because their size is difficult to process through traditional database and *software* techniques. The characteristics used to distinguish *big* data and general data include, among others, *Volume, Variety* and *Velocity.* abbreviated as 3V. Meanwhile, according to Boyd and Crawford, *big* data is defined as the ability to search, combine, and cross-reference very large data sets.

In terms of language, the term "*big* data" is generally used to describe large, varied, complex and long-term data sets generated from various instruments, sensors or computer transactions. (Megahed & Jones-Farmer, 2015) . At the same time, analytics is a set of technologies and techniques that require new forms of integration in revealing the hidden great values from different, more complex, and larger than usual big data sets.

2.2 Performance

Performance is usually interpreted as a person's success in working. Specifically, Lawler and Porter (1967) argue that effectiveness is a person's internal success in completing a task. Prawirosentono (1999) in Sutrisno (2010) states that efficiency is the result of work that is capable of achieved by a person or group of people in an organization according to their responsibilities responsibility and authority to achieve organizational goals legally, without breaking the law and in accordance with ethics Also morals.

According to Miner (1990), performance is how someone is expected to perform and behave according to the tasks given. Every expectation about how someone should behave when performing a task reflects their role in the organization. For organizations, both government or non- governmental organizations, have the means to direct a group of people who play an active role as actors to achieve organizational goals use achieve predetermined goals (Laia, 2023) .

2.3 State Civil Apparatus (ASN)

Definition The State Civil Apparatus (ASN) which was previously known as the term Civil Servants (PNS) was put forward by several experts, including those whose opinion according to AW Widjaja defines employees as the result of human work that is physical and spiritual which is always needed, therefore it is one of the main capitals in working together to achieve organizational goals. certain. Furthermore, AW Widjaja also stated that "Employees are people who work in a particular institution, be it a government institution or a business institution " (Sri Nur Wahyuningsih, 2023) .

State Civil Apparatus is a public servant/state servant who is responsible for public services to ensure the welfare of the community. This is reinforced by Law Number 5 of 2014 which explains that as part of bureaucratic reform, the central government considers it necessary to form ASN to meet national needs and global challenges in organizing ASN as a profession that has an obligation to manage, develop itself and be accountable for its performance, in addition to the application of the merit principle in the application of ASN management.

3. RESEARCH METHODS

3.1 Research Design

Research design used in this study is a descriptive design. According to Sugiyono (2005:21), the descriptive method is the method that describe or analyze research findings but are not used to draw broader conclusions. According to Whitney (1960:160), the descriptive method is a search for facts with appropriate interpretation. Descriptive research can be said to be research that tries to describe symptoms, current events, or actual problems.

The reason the author chose this descriptive research design is because it is considered appropriate to allow the author to describe various sources of information and information from different experts. Descriptive research is not limited collect information from various sources, but the information obtained can also be analyzed to describe and respond to problems of a phenomenon or event that is currently occurring.

3.2 Data collection technique

3.2.1 Literature Study

Literature study is an activity research using library information collection methods, reading and taking notes, and managing research materials. According to Daniel and Warsiah (2009:80), Literature Study is research which is conducted researchers by collecting several books and journals related to the problems and research objectives.

The author's purpose apply technique This to reveal various theories related to the issues that arise/are studied as reference material in discussing the research results. This technique is applied by obtaining research journals related to the problems faced, namely the role of big data analytics in the performance of civil servants. The goal is to obtain theoretical information that supports the truth of the information obtained through research.

4. RESULT AND DISCUSSION

4.1 Big Data and Its Rapid Development

Big Data Analytics is two draft different but have connection One each other. *Big Data* or known as big data concept in various literature own understanding or own definition frequently used standard used as form information assets that have large volumes, high speeds and many variations, which result in the existence of innovative and cost-effective forms of information processing, which can be used in improve insight and the quality of decision making (Muhammad Wali et al., 2023) . *Big Data* is part from development digitalization in the current era , where *Big Data* is Alone become data/ information resources that have large volumes , are heterogeneous , and autonomous with distributed control as well as decentralized and effortless explore a complex and evolving relationship (Manshur, 2021).

Draft about This *Big Data* Actually has debated since long time ago even Already done dozens year previously about problems, potential and benefits *Big Data* is itself. This big data concept actually start emerged in the 1960s, when big data concept becomes quotes and discussion scientific in debate political statehood especially in the United States (US). Where, around the 1960s, the US government began build *data center* First For keep more from 742 million return taxes and 175 million sets of fingerprints finger with transfer all notes the to computer tape magnetic which must be stored in one side location (Manshur, 2021).

Starting to appear the concept of big data in the 1960s, and the development big data center first, no let go from the era of revival modern computing, where, approximately the 1964s have appear computer generation third beginning such as the IBM System/360, where generation computer third start use the concept of integrated circuit and combining some transistors so that impact to drastic increase in strength processing so that open road in data operator scale big and fast. In addition, the emergence of more modern database concepts relational and usage statistics concurrent computing with generation computer Third, it allows organization or group start store and organize data efficient from some big data, so that based on matter that's it then big data then appear and continue experience development.

Big Data which has draft the main thing namely data that is sized big, of course every year experience significant development. Even when the internet has become needs, quantity data growth is very significant the magnitude. Where based on report from Statista in article on *the website* explodingtopics.com the amount of world data in 2023 has reach 120 zettabytes or equivalent to 112 trillion gigabytes, where the data is

experience increase of 23.71% compared to 2022. Even data size in 2023 experience very significant development from in 2010, where only about 2 zettabytes or experience increase almost 60 times. In addition , it is also predicted that the data size will reach 181 zettas by 2025 or experience increase 4x as much only in two year (Duarte, 2023).

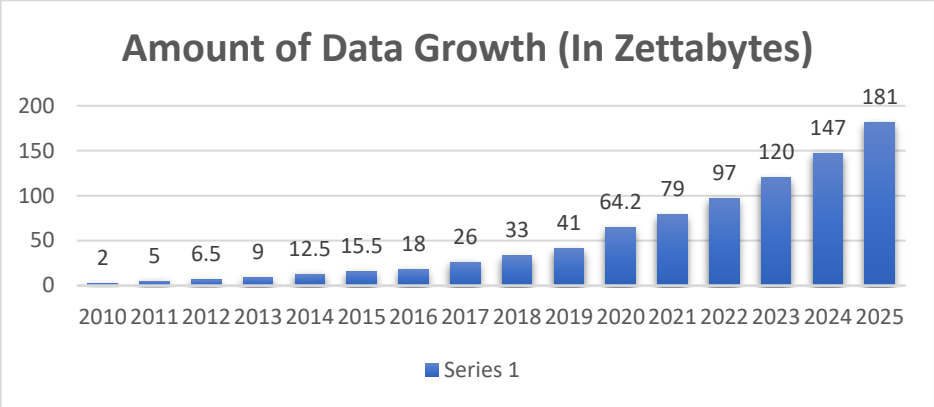

Figure 3. World Data Growth Over Two Years Decade
(Source: Statista.com)

Based on the data above, of course such a rapid development of data big, no let go from use of the data Alone especially the internet. Where with the existence of the internet is public access diverse matter For find answer or the reference, so that the data becomes Key and materials burn For made into source information to proces. Such data development fast too, no let go from emergence diversification in utilization technology and utilization data form, where data utilization for field commercial, government, or social media become trigger increasing data size. In addition, the development technology and utilization data form such as *cloud computing*, *file sharing*, and *the internet of things* that require data and output various types of data, causing data size is increasing increase and make Then cross data increasingly solid and big the amount especially on the internet.

About Then cross data, according to results report made Sandvine Phenomena in *The Global Internet Phenomena Report January* 2022 states that, in 2022, based on proportion Then cross- data, form and video data such as that generated by TikTok accounted for 53.72% of the proportion Then data traffic on the internet. It is show that, the data in Video form is data that in 2022 will become data with amount most internet usage used in a way proportion and have, percentage that spends more from half proportion Then data crossing outside video form. In fact , audio becomes data form that is proportion Then across the internet into data that has smallest proportion only of 0.2% (Cantor, 2022). The proportion the based on results the above report there are 10 proportions category namely:

Table 1Internet Data Traffic 2022

Category	Internet Data Traffic Proportion
Video	53.72%
Social	12.69%
Gaming	9.86%
Web Browsing	5.67%
Messaging	5.35%
Marketplace	4.54%
File Sharing	3.74%
Cloud	2.73%
VPN	1.39%

Audio	0.31%

(Source: Sandvine Phenomena)

Based on the table above, then data cross-section throughout in 2022, it will be dominated by video, so matter mentioned show that, the video becomes contributor the biggest in increase big data size, thing the because, users Lots surfing in video matter data production, so that consequence from the production process that, makes the data more increases, and the number proportions on the Internet are also becoming more high, because data usage and forms the.

With see a number of the above developments, of course the original concept of big data nature simple and frequent debated about benefits, problems, and potential. At the time This has succeed show source its power. In fact, the existence of big data as source Power said, at the time This precisely become material burn For made into as material in produce a information, which will later information the used For diverse interests. In addition the resulting effects also contribute in improvement the amount of data each year the more increased, so that matter the shows big data becomes the concept needed and become a concept that is always experience development with fast. Even consequence such a development fast and high the potential generated, not close possibilities in the sector public and government big data will also utilized, so that qualified human resources are needed in handle matter said, especially ability in operate and analyze big data the become a form knowledge new.

4.2 Performance of State Civil Apparatus in Utilizing Big Data Analytics

The performance of ASN resources is the most important factor in public administration. Therefore, the government continues to strive to improve the performance of ASN resources. The challenge of improving the performance of ASN resources is becoming increasingly complex, especially in the current situation moment. This is facing the era of technological disruption leading to the emergence of the Industrial Revolution 4.0. The digital revolution that has reached all levels of society has transformed civil society into *a digital public society* that requires ASN to adapt to its nature and needs. The Covid-19 pandemic has caused changes in trends conventional service systems to digital. Digital transformation is the development of integrated system and process *platforms* that utilize digital technologies that fundamentally change the way organizations collect and use data to positively impact customer interactions (Stone, 2019).

The bureaucratic process that is shifting to digital cannot be separated from the role of ASN as a human resource. There are several parties involved in designing the digital management model, one of which is ASN. Digital government is a collective effort involving many *stakeholders*, interest groups, and actors (Sandoval-Almazán et al., 2017) . The creation of digitally capable ASN supports the emergence of digital bureaucracy that requires the implementation of the right strategy, one of which is by utilizing information technology. The use of information technology in administration aims to support the creation of public value through increasing state activities and service provision.

However, changing work culture is more important than digital transformation. Digital transformation is more about changing the culture of an organization than just implementing new technology. In fact, technology is just a driver or catalyst for change. (Stone, 2019) . The dominant young ASN work culture currently strongly supports the implementation of bureaucratic digitalization because it has adopted a more flexible model and is in accordance with ASN needs. A pleasant working atmosphere has produced ASN who not only know how to use digital devices, but are also flexible in their responsibilities in providing services. ASN are expected to be able to complete the process of facilitating the use of digital service applications launched in each partner agency.

Therefore, ASN is not only required to have technical skills, especially information technology, but is also required to develop soft skills in providing services. Excellent service, prioritizing friendship, the important thing is that coworkers feel comfortable and get maximum service. Along with changes in work culture, this in turn also changes the social paradigm towards ASN in a positive way. Having a Smart ASN profile is one step to change the positive image of ASN (Khaeromah et al., 2021) .

To meet the high expectations of partners and management support, ASN in each work unit competes to provide service applications, both for internal organizational needs and support services for partners. A more flexible work system by reducing rigid coordination patterns has provided the best comfort for workers amidst heavy workloads. Thus, the bureaucratic system that previously seemed rigid, is now more agile and flexible. The hierarchical system is gradually changing into a flexible network that allows the bureaucracy to develop into an agile bureaucracy that can be interpreted simply, quickly, and better. By creating an agile bureaucracy, it allows employees to work synchronously and together to solve complex problems involving various stakeholders in a coordinated manner and create better added value for the organization and the communities it serves (Rulinawati, 2020) .

The government system uses *big data* to accelerate the implementation of government programs and ASN performance. Some of the benefits that *big data can provide* for management include its use in government programs, allowing the public to increase transparency and participation of all stakeholders. In a management system with *big data*, different policies can be made faster, more accurately, and cheaper with different management bodies. The use of *big data*, which uses information through an analytical approach to make results more structured. The role of *big data* for authorities or public services is very important because, with *big data analytics* you can turn external data into information. Then turn that information into action to help run the government.

In ASN management performance is due to work efficiency using *big data* so that work based on convention onal can reduced. The use of *big data* can be a solution to the government's financial problems, because with *big data, financial processes can be cut more efficiently.* The effectiveness of the government is expected to have a positive effect on the survival of the country and society. The government can utilize the data contained in *big data to provide information quickly*, easily, accurately and cheaply to determine policies that are in accordance with the needs of the community. The impact of utilizing *big data* in public administration is the transparency of the information provided. This is very useful for the public to get more transparent information about the government so that it can implement an open government that can increase public trust in the government.

4.3 Utilization of Big Data as Part Of Government Based on Electronic

Utilization technology *Big Data* in Indonesia, no let go from the existence of bureaucratic reform being implemented For bring changes in national and state life that are fundamentally moving towards the direction of a democratic and transparent government system. The rapid changes and developments in the dynamics of society and technology today demanding the formation of a clean, transparent government that is able to respond to demands for change effectively. Consequence emergence demands the cause the need for modernization and revitalization administration government (Muhammad Wali et al., 2023) .

That matter become base existence Presidential Instruction of the Republic of Indonesia Number 3 of 2003 concerning National Development Policy and Strategy *E - government*. Instructions the become the initial instrument from government For answer challenges, where the government central and regional must be able to form new dimensions into the organization, management systems and work processes, and dimensions new That namely digital technology. Use and utilization of digital technology in administration government at least covers two activities related with data processing,

information management, management systems and work processes electronically; and utilization advances in information technology so that public services can be accessed easily and cheaply by people throughout the country.

Big data as part of draft digital technology, in concept government especially in the sector government based on electronics, utilized for get accurate, up-to-date, integrated, accountable and easily accessible data (Van Ooijen et al., 2019). In addition, the utilization and use of *Big Data* in government is very diverse and complex, with its application in the development sector starting from the political, economic, socio-cultural and defense and security sectors. Utilization *Big data* in the sector government, used as input in analyzing various kinds of sectors related to these fields (Muhammad Wali et al., 2023) .

One of example utilization *Big Data* in the above fields namely, regarding Number Parent Population (NIK), where NIK which is currently a "*Single Identity* " can be used for political analysis input including knowing voter data, input for election policies, input for parties in terms of recruitment and political communication strategies. In the field of economy, *Big Data* through NIK input is used by ASN for process and make information in measuring the level of economic growth, population mapping, Human Development Index, and so on. In the social field, the existence of *Big Data* is utilized For measuring poverty levels, data collection various social assistance that has been implemented by the government at this time with using data from population data (Muhammad Wali et al., 2023b) .

Based on the utilization above, then very good data management is needed, especially for policy formulation in various fields. In addition, a new public management model is also needed regarding strategic management, internal component management, and component management. external for utilization *Big Data* for its management can maximum so that the implementation service public good electronics. Efforts to realize that management *Big Data* can reach objective from existence *E-government* then needed design various programs. Where Hacker and Van Dijk (2000) in Graham and Kelly (2021) stated There is some programs for management *Big Data* so that you can reach objective from *E-government,* namely:

1. Openness access information for citizens, with a number of things to do under consideration namely: a) the information you want disseminated government Good in the form of news, regulations, policies, or Law. b) information collected government for internal use however can given to other users such as geographic data, economics or demographics. c) information that must be provided government as response on request citizens, such as performance indicators government, personal data, or report management and budget.
2. Online Transactions
3. Provision Public service
4. Democracy Process and Citizen Participation

Based on the above program, it is expected to give convenience and access citizen to various types information government convenience and improved quality in terms of online transactions, provision of public services and democratic processes as well as increasing public participation. So, the results from the implementation of *E-government* and its use and management of this *big data* will increase service to the public well. In addition, the issue Regarding *big data management* and *e -government,* this will remain an interesting issue and can be researched further considering that we are currently in an era of disruption that shows that technological developments and societal dynamics continue to change rapidly. (Muhammad Wali et al., 2023) .

In terms of know whether implementation *E-government* in agencies public including in matter management the *big data* already walks with good and have performance satisfactory agency or no, included in it performance from apparatus that runs *E-government* and utilize and manage *big data* in his agency. So every year the Ministry of Empowerment State Apparatus and Bureaucratic Reform Republic of Indonesia

always emit evaluation about Results of the Government System Based on Electronics in agencies center and government area as form For realize governance clean, effective, transparent and accountable government as well as service quality and trusted public through implementation *E-government.*

Based on the above, in see how far the agency the apply *E-government* includes utilization *big data* and have performance good apparatus in operate matter said, then on January 11, 2024, the Minister of Empowerment State Apparatus and Bureaucratic Reform the Republic of Indonesia issued Ministerial Decree Number 13 of 2024 concerning the Results of the Evaluation of the Government System Based on Electrok in Central Agencies and Regional Governments in 2023. Based on results evaluation of the 34 State Ministries, in 2023 the Ministry of Tourism and Creative Economy / Tourism and Creative Economy Agency will become ministry that has index *E-government* is 4.67 with predicate satisfying. It is show that ministry the throughout 2023 has maximize *E-government*-its especially in matter utilization *big data* and also shows that performance apparatus civil in operate *E-government* and utilizing *big data* has walk with predicate satisfying (MenpanRB, 2024) . As below Here, there are five ministries that have index satisfying in matter *E-government* throughout 2023.

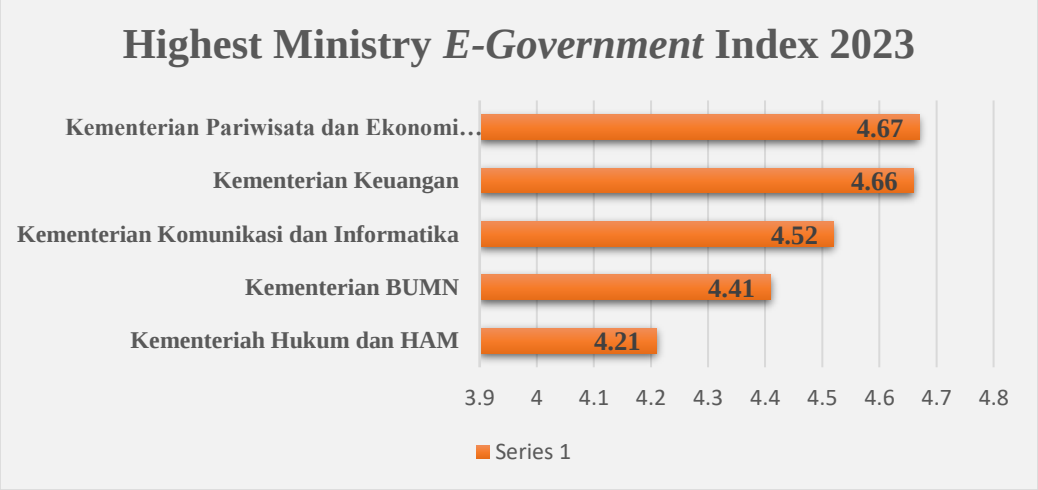

Figure 4. Index *E-Government of* the Ministry of the Republic of Indonesia 2023 (Source: MenpanRB)

Outside from Ministry of State, based on results evaluation from implementation *E-government* and its utilization *big data, the* State Administration Institute in 2023 will become a non-ministerial Government Institution that has index Highest *e-government* with own mark of 4.26 with predicate satisfactory and followed by BPS with score 4.17. Meanwhile, for government areas that have index Highest *e-government* including in matter utilization *big data* in 2023, held by Central Java Province with index of 4.26 and makes it province with index the highest *e-government* in Indonesia and Java Island, while DKI Jakarta, which is known as as the country's capital is ranked third with score of 4.21.

As below This there is picture regarding the list of five non- ministerial and government institutions areas that have index Highest *e-government* throughout 2023 (MenpanRB, 2024) .

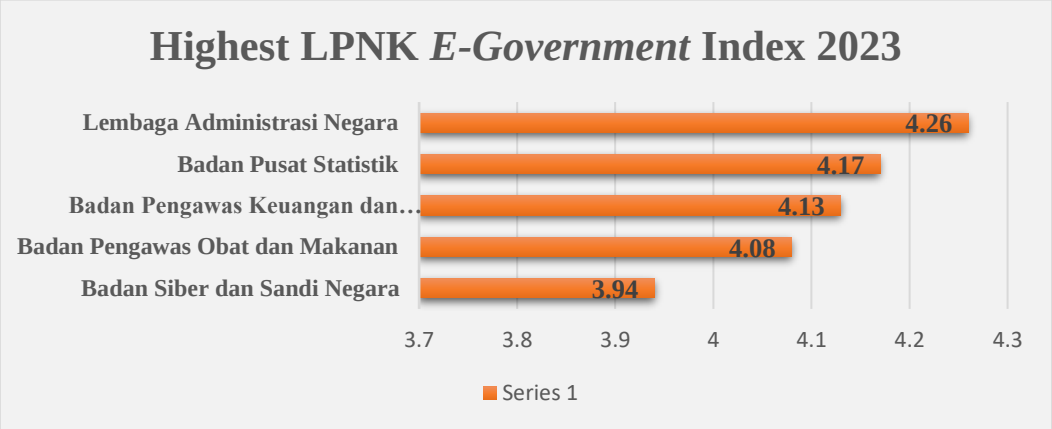

Figure 5. Index *E-Government* Institutions Non-Ministerial Government of the Republic of Indonesia 2023
(Source: MenpanRB)

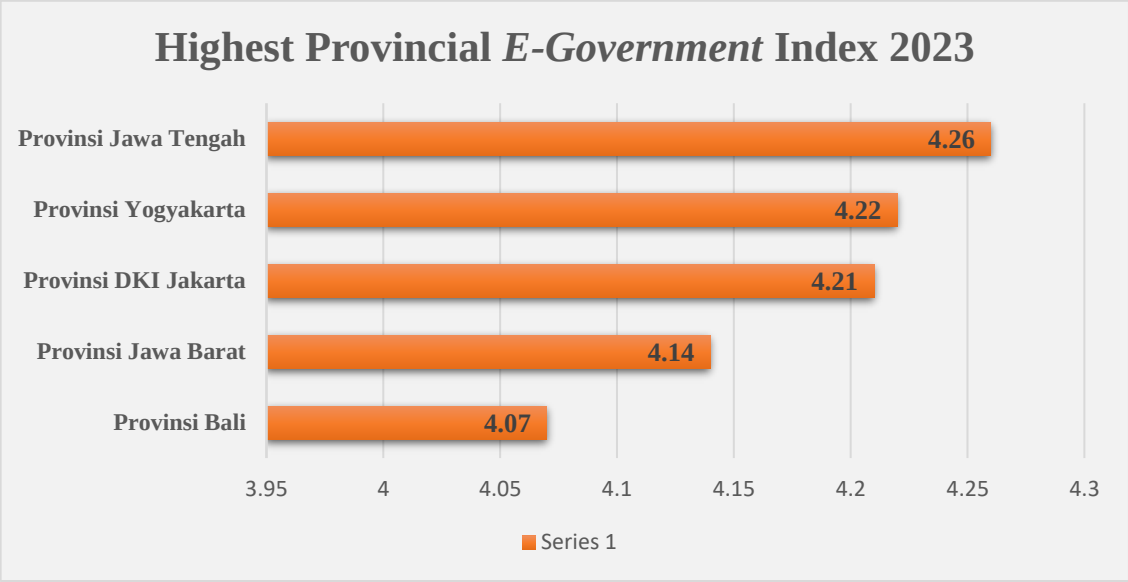

Figure 6. Index *E-Government* of Provincial Government 2023
(Source: MenpanRB)

Based on these data, it has been showed that agencies government, both at the center or in the regions, in particular overall has apply draft *E-government* includes in matter utilization *big data.* In addition, if see index it can also be known that apparatus in every agency has utilise use *Big Data* in its performance on the concept *E-government* especially in matter service, so that consequence from utilization said, making index score *E-government* agencies the become high and show existence performance apparatus high agency in operate *E-government* includes in matter utilization *Big Data* in carry out the service process.

CONCLUSION

Based on discussion mentioned, it can be concluded that *Big Data* namely asset information with large volume, speed height, and variation many. Development modern computing, relational databases, and statistics computing become booster main draft *Big Data*. The amount of world data continues to grow. increase in a way significant, especially with internet growth By 2023, the estimated data volume will reach 120 zettabytes. Video data is becoming contributor main to Then cross internet data, contribute more from half proportion in 2022.

In Apparatus Performance Civil States Utilise *Big Data Analytics* become Digital transformation, the beginning happen when existence the COVID-19 pandemic has prompted change culture work and implementation of E-government. Apparatus Civil State needs develop skills technical and *soft skills* in give excellent service. Utilization *Big Data Analytics* in administration public can increase efficiency and solutions problem finance government. There is Instructions President of the Republic of Indonesia Number 3 Years 2003 became the basis for bureaucratic reform and development *E-government*. *Big Data* used in various sector development, including politics, economics, social and defense. Utilization *Big Data* in government can increase transparency, effectiveness and participation public.

Evaluation Results show that the Ministry of Tourism and Creative Economy get predicate satisfying in *e-government* sector ministries, and the State Administration Agency received predicate satisfying too but as non- ministerial sector. In government area, especially Central Java Province, reached highest E - *government index* in 2023. Agency government in a way overall show implementation draft *E-government* and its utilization Good Big *Data*. With development *Big Data* and its utilization in context *E-government* become factor important in transformation modern government. ASN needs Keep going increase skills and knowledge they for optimize use *Big Data* in taking decisions and services public. Evaluation performance agency government show that implementation *E-government* and its utilization *Big Data* has given impact positive to transparency, efficiency and quality service public.

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