

Research Article

Bridging the Gap: Regulating and Innovating Talent Management for Indonesian Civil Servants Through Technology and Data Analytics

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Abstract.

This research aims to explore how technology, data analysis, regulations, and laws can work together in the context of Indonesian Civil Servant talent management. Thus, this research will not only provide in-depth insight into the application of technology in talent management, but also identify challenges and opportunities that must be addressed in the regulatory context relating to the use of Civil Servant personal data. Talent Management within the Indonesian State Civil Servant is a key element in improving the efficiency and quality of public services. The importance of talent management in the context of Civil Servant bureaucracy is increasingly understood, especially in handling increasingly complex societal demands. The quality and competence of Civil Servant has a direct impact on the effectiveness of implementing government tasks. The research method used is qualitative with a literature study approach. The insight of this research shows the potential to provide valuable guidance for stakeholders in government bureaucracy to develop an integrated and effective approach to Civil Servant talent management approach by SMART Civil Servant and BerAKHLAK core value, which can improve public services and maintain integrity in the bureaucratic environment toward a world-class bureaucracy.

Keywords: civil servant, data analytics, smart civil servant, BerAKHLAK, technology

1. Introduction

In Indonesia, the state civil apparatus or civil servant in this research called ASN plays a vital role in public services. ASN is the spearhead of carrying out state duties and services to the community. The quality, competence, and efficiency of ASN contribute directly to the effectiveness and quality of public services. The realization of ASN as competent and competitive human resources can be implemented through ASN talent management that is professional, has basic values, professional ethics, is free from political interference, is free from practices of corruption, collusion, and nepotism. Talent

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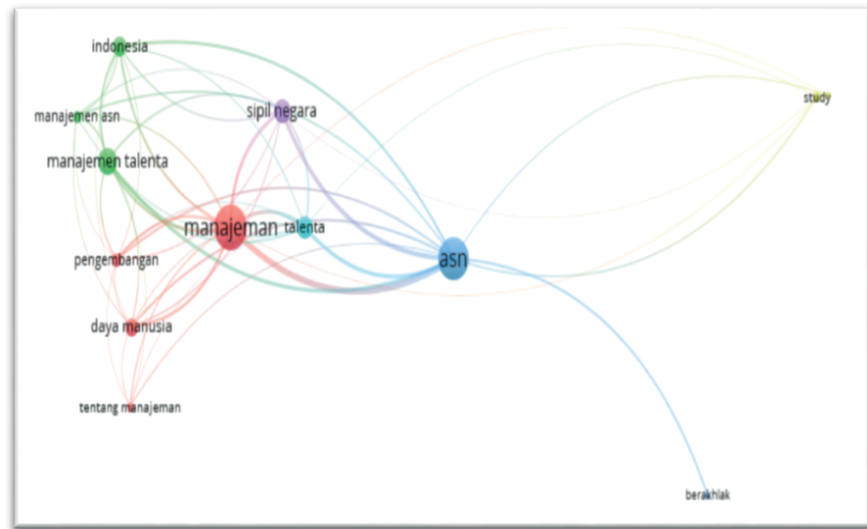
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Management applied to ASN is a comprehensive and dynamic process for managing and developing ASN potential in accordance with the position held or intended through integrated development. This aims to ensure the availability of ASN talent. The ASN talent management process also requires a significant investment of resources. ASN talent management in government organizations has two roles, namely: (1) Value creator, namely producing ASN who have value, where the government is said to be successful if it succeeds in developing apparatus that shows the ability to change the thinking structure and philosophy of the work environment. (2) Value protector, which means that the ASN talent management developed by the government must be able to protect individuals with high-value talents, which are produced through investment in the apparatus (competency development).

There are two main factors of concern in ASN talent management, namely regulations and technology. Relevant regulations such as Undang-undang Number 5 of 2014 concerning State Civil Apparatus [1], Government Regulation Number 11 of 2017 concerning Management of Civil Servants, and Government Regulation Number 49 of 2018 Management of Government Employees with Employment Agreements play an important role in the management of ASN to produce professional ASN, has basic values, professional ethics, free from political interference, free from practices of corruption, collusion, and nepotism [2],[8]. This regulation covers various aspects, including recruitment, promotion, performance appraisal and ASN career development. On the other hand, technology is also an important element in effective talent management. The use of modern technology and data analysis can help identify potential talent, monitor accurate performance, develop relevant competencies, and make more informed decisions based on data. The application of technology provides new capabilities in monitoring ASN behavior and identifying actions that are not in accordance with ethics.

The application of technology in ASN talent management cannot be separated from the regulatory framework and relevant laws, such as the ASN Law, Government Regulations on ASN Management, Government Regulation Number 17 of 2020 where employees have rights and obligations related to competency development, playing an important role in determining how data can be collected, stored, used, and shared in the context of talent management. Therefore, effective synergy between existing regulations, technology and data analytics is essential. This ensures that the application of technology in ASN talent management complies with legal requirements, prioritizes individual privacy, and adheres to ethics in data use. Not only that, to find out the GAP for the research to be carried out, researchers created a libbiometric chart to map the direction of research on talent management and SMART ASN.



Source: Scopus and Google Scholar processed using Vosviewer

Figure 1: Keyword co-occurrence network from Talent Management related publications.

Based on Figure 1, the strength of the relationship between two nodes refers to the number of studies carried out using these keywords. It can be used as an index to describe the relationship between two nodes. The total link strength of a node is the sum of the link strengths of this node over all other nodes. The node, “talent management”, has thicker lines with “ASN”, “berAKHLAK”, “development”, “Study”, “Indonesia”. In this case ASN means civil Servant. These are all nodes whose link strength is greater than 10. The relationship between “talent management” and “ASN” and “BerAKHLAK” implies close integration.

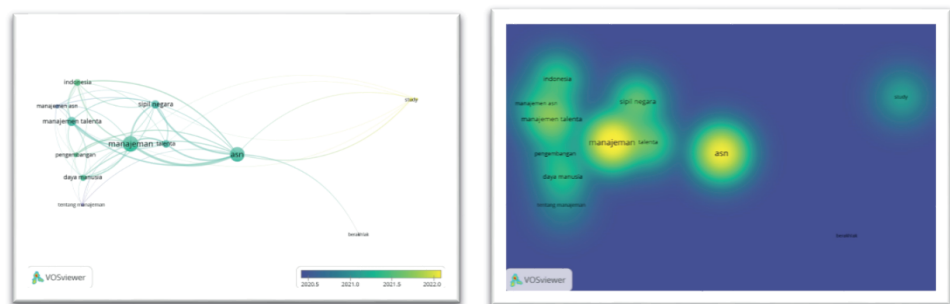


Figure 2: Peta visualisasi tahun dan kepadatan kata kunci dari publikasi terkait Manajemen Talenta.

From Figure 2, before 2020, research on talent management and ASN was widely carried out and the keywords in that period were concentrated on “ASN management”, “development” and “state civil service”. Research on talent management at this stage is fundamental. Entering 2022, research on talent management and ASN will begin to decline, in fact, in 2022 there will be little research on talent management. Keywords in

the term talent management have a small proportion. Meanwhile, in the density graph, the solid yellow color indicates a lot of research on the keywords “talent management” and “ASN”. However, no one has yet made SMART ASN a research network.

This is where the importance of this research emerges. This research will investigate how the use of technology, data analytics, and compliance with regulations in ASN talent management in Indonesia based on SMART ASN, can influence public perceptions of the bureaucratic environment. This research also provides an in-depth view of the role of the interconnection between technology, regulation, talent management, and bureaucratic integrity, which can contribute to improving public services and increasing public trust in the government.

2. Methods

The type of research used to answer the research objectives is qualitative research with a literature study method approach. The advantage of this method is to gain a better understanding of the research carried out [6], [7]. This literature review seeks to provide an overview and evaluation of how technology, data analytics, regulations and laws can work together in the context of ASN talent management, SMART ASN towards the readiness of Indonesian ASN towards a world-class bureaucracy. The literature study was carried out by analyzing content from various research journals and other scientific references that discuss the influence of ASN talent management, SMART ASN, Core Values and Morals using Google Scholar and Scopus in the 2018–2022 period. The keywords or keywords used are as follows “World Class Bureaucracy” AND “ASN Core Values” OR “Talent Management” AND “SMART ASN”. The steps used to answer the objectives of this research are (1) Searching for appropriate literature using the tools Perish and Publish, and Vosviewer, (2) grouping literature based on publication characteristics and keywords, (3) collecting supporting data from other publications, (4) visualizing data, and (5) analyzing and exploring information from literature studies and visualized data.

3. Results and Discussion

3.1. Demographics of ASN in Indonesia

Bureaucratic performance is currently a very strategic issue because it has a broad impact in all sectors, one of which is the economic and political sectors. In economic

terms, improving the performance of the bureaucracy will be able to improve the financial conditions that the Indonesian nation really needs in order to get out of the prolonged economic crisis. Not only that, but it is also hoped that by improving the bureaucracy it will reduce the level of abuse of power in the government environment [7]. Meanwhile, in terms of politics, improving the performance of the service bureaucracy will have a broad impact, especially on the level of public trust in the government.

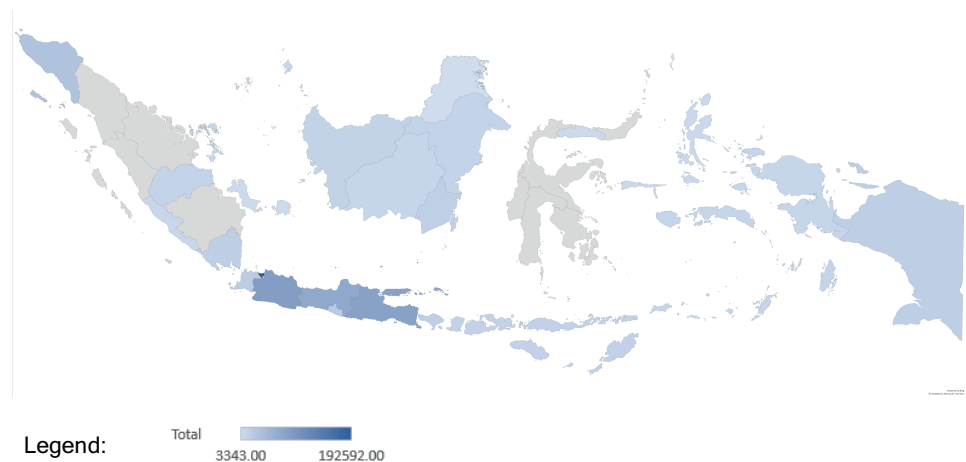


Figure 3: Map of ASN distribution in Indonesia.

From Figure 3, it shows that the distribution of ASN outside Java is still minimal. This image means that the thicker the color, the greater the number of ASN in that area. Likewise, if the colors in the image are thinner, the number of ASNs is small [8]. Where the provinces with the highest number of ASN are DKI Jakarta, West Java, East Java, Central Java, Aceh, and the Special Region of Yogyakarta [9].

TABLE 1: Number of ASN and Population.

Province	Total Civil Servant (People)	Total Penduduk
DI Jakarta	192.592	10,56 Juta
West Java	8.6725	49,94 Juta
East Java	8.0745	39,74 Juta
Central Java	7.2616	34,55 Juta
Aceh	3.4637	5,37 Juta
Special Region of Yogyakarta	2.4673	422.732

Source: National Civil Service Agency, 2022

Meanwhile, the smallest distribution of ASN proportions compared to the total population is in the provinces of Bengkulu, North Maluku, Gorontalo, and North Kalimantan. This data shows that the distribution of ASN is still uneven. So, the government needs to

review the ASN arrangement. Structuring ASN through steps including: First, according to Prof, Crisnandi in the news of BKN mapping the qualifications, competencies, and performance of ASN through talent management, thereby producing a good ASN profile [10]. Second, according to Prof, Crisnandi States that the results of talent management mapping which includes qualifications and performance competencies of ASNs can be used as a basis for taking further policy steps in accelerating the structuring of ASNs, including competency and career development, transfers, and rotations for ASNs who qualifications and competencies and whose performance do not have is poor in today's work environment [10]. Third, anticipating the shortage of ASN while accelerating the achievement of government organizational targets and reducing employee costs, especially pension costs, then ASN employees other than ASN can be combined by recruiting professional Government Employees with Work Agreements (PPPK) according to the level of position required [11].

3.2. Impact of Talent Management and SMART ASN on Government Bureaucracy

From the data collected by researchers over a period of 6 months starting from January to August 2023, there are various opinions stating the positive impact of implementing talent management and SMART ASN on government bureaucracy. According to Bonso, increasing efficiency, effectiveness, and responsiveness in the delivery of public services [12]. According to Rachmayanti, the combination of a Talent Management strategy that focuses on developing employee competency with the application of SMART ASN based on technology and analytical data that encourages accountability, transparency, and innovation, has brought positive changes in the way government bureaucracy operates and provided direct benefits to the community [13]. Meanwhile, researchers and bureaucratic observers have also predicted negative impacts regarding the implementation of talent management and smart ASN in the government bureaucratic environment. According to Khaeromah, if policies are not implemented with the support of good data, information and technology, resistance to change will occur, where the Talent Management and SMART ASN implementation process may face resistance from employees who are reluctant to change or who feel threatened by a stricter performance assessment process. [14]. According to article by Fifi Ariani, based on ASN education data in Indonesia in 2022, there will still be 13,916 ASN with elementary school education, 537,429 ASN at junior high school, and 29,493 ASN at senior high school [15].

TABLE 2: ASN Education Levels in Indonesia.

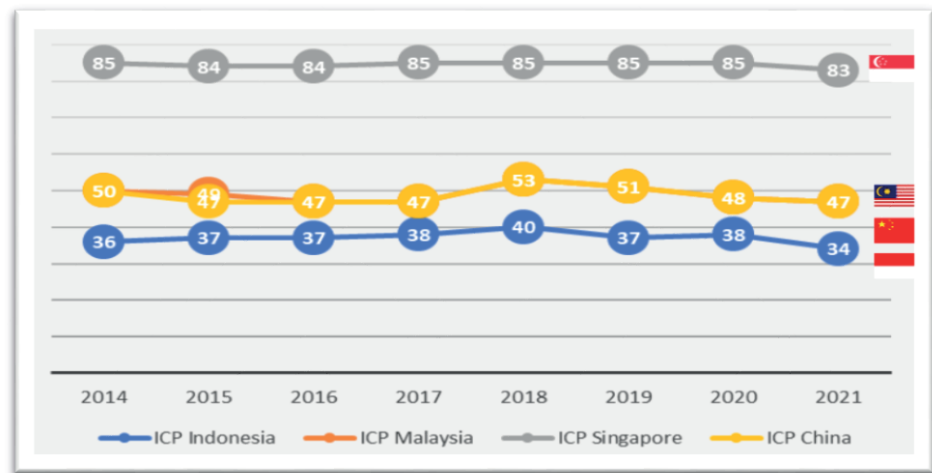
Education Level	Male	Female	Total
Elementary school	12.677	1.239	13.916
Junior High School	364.237	173.192	537.429
Senior High School	26.144	3.349	29.493

Based on table 2, it is feared that there will be a competency gap, where increasing focus on certain competencies, for example improving technology and educational levels, can create competency gaps between employees, which can affect team dynamics and collaboration [15]. In Yusof research it was also said that there would be overemphasis on numbers and Key Performance Indicators (KPI), because SMART ASN could encourage too strong a focus on achieving KPI which might sacrifice other important aspects of public service such as qualitative aspects and ethical values [16]. Furthermore, according to Yusof article, bureaucracy overload will occur, where the implementation of a SMART ASN system that is too complex and bureaucratic may consume a lot of time and administrative resources, disrupting operational efficiency [16].

3.3. The importance of Talent Management and SMART ASN in Government Bureaucracy

The application of Talent Management and the SMART ASN concept to government bureaucracy creates significant improvements in the quality of public services, as well as accountability in all government sectors. This initiative also strengthens the commitment to the Core Value of berAKHLAK which is supported by the Circular Letter of the Head of BKN Number 14 of 2022, which underlies actions and ethics in government bureaucracy. By identifying, developing, and utilizing existing talent in government organizations, the Talent Management program has provided a measurable positive impact. Increasing employee competency does not only focus on technical skills, but also on ethical values, including integrity, honesty, and commitment to quality public services [17]. According to Publication by Maksim in 2022, creating an organizational culture of berAKHLAK, where employees are encouraged to uphold implementation according to the Core Value indicators of berAKHLAK. The importance of Talent Management and SMART ASN together with the core value of berAKHLAK is also reflected in efforts to encourage innovation and prevent corruption in government bureaucracy [18]. Policies related to preventing corruption within ASN can be formulated based on Corruption Perception Index (ICP) data. ICP is a score that describes the perception or opinion of the people

of a country regarding corruption in their country that occurs in public and political positions. Indonesia's ICP data for each year can be seen in the following graph.



Source: Transparency International, 2022

Figure 4: Corruption Perception Index in Indonesia, Singapore, Malaysia and China.

The ICP has a score indicator from 0 to 100, where a higher score indicates a lower perception of corruption, while a lower score indicates a higher perception of corruption. Based on Figure 4. Indonesia with the blue line graph has an ICP below China, Malaysia, and Singapore. ICP Indonesia shows that Indonesia continues to experience serious challenges in fighting corruption. Indonesia's ICP in 2022 is at a score of 34/100 and is ranked 110th out of 180 countries surveyed. This is very troubling for the bureaucracy in Indonesia because the level of public trust in government bureaucracy is starting to decline. This becomes a serious problem if it continues. So ASN in Indonesia really needs Talent Management and the SMART ASN concept in bureaucracy in preventing corruption. The implementation of Talent Management not only focuses on increasing efficiency and accountability, but also strengthening internal control and transparency, which are important elements in preventing corruption in the public sector. The implementation of SMART ASN, which prioritizes transparency in measuring performance and achieving targets allows for tighter supervision of employee actions. A well-documented measurement process and transparent disclosure of performance data can help governments identify suspicious or non-compliant actions, minimize corruption risks, and provide early warning signals. In addition Pasal 24 and Pasal 25 Ministry Regulation PANRB No. 6 of 2022 that employee performance evaluation is carried out through the stages of determining organizational performance achievements, to the use of website-based applications to measure employee performance, such as BKD and the Employee Performance Assessment Application, the e-KINERJA application is now even being

developed to help collect data and information on ASN personnel within the government bureaucracy in Indonesia.



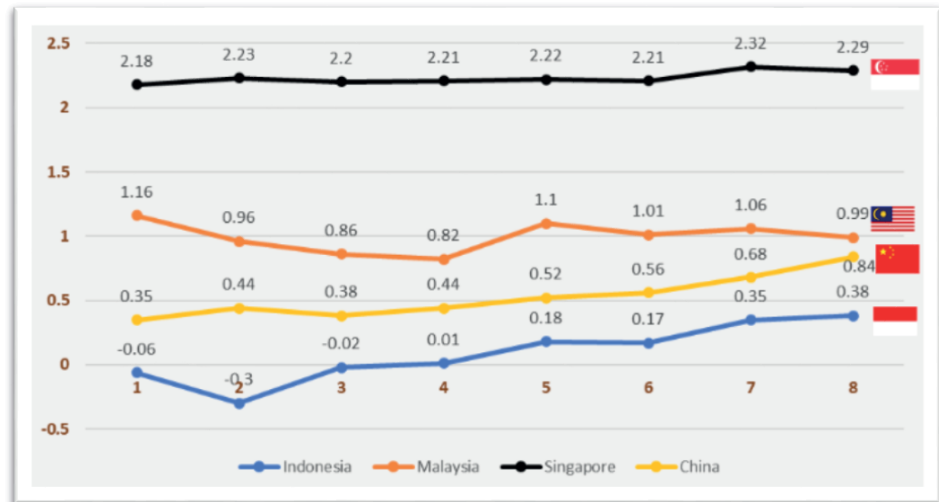
Figure 5: Image of E-Kinerja.

The e-KINERJA is the form of data collection in the use of technology and analytical data in government bureaucratic environments. This proves that the government technology sector in Indonesia has developed following the development of digitalization. This is intended so that the application of Talent Management and SMART ASN, with the core value of AKHLAK can create a cleaner bureaucracy and avoid corruption. In a more specific context, this effort has positive implications in realizing good governance and supporting government that is free from corrupt practices that are detrimental to society and sustainable development.

3.4. ASN Readiness towards World Class Bureaucracy

There are 4 aspects used to measure ASN readiness towards a world-class bureaucracy based on SMART ASN, namely Integrity, Global Insight, Networking, and Mastery of Information Technology. This has been measured by the World Bank Group using the Governance Effectiveness Index (IGE). IGE measures the quality of public services, civil services, policy formulation and implementation, and the credibility of the government's commitment to improving or maintaining these aspects. Indonesia's position can be seen in the following picture.

Based on Figure 6, researchers have analyzed and explored the bureaucratic conditions in each country. Various Scopus scientific articles with sources "Governance", AND "World Class Bureaucracy". Where according to Bai, G., & Hao, H ASN's readiness towards a world-class bureaucracy based on the integrity aspect can be seen from the level of government transparency in decision making, use of public funds, and implementation of policies including the availability of public information and accessibility of data that is important for society [19]. This is still a challenge for the bureaucracy in Indonesia because access to public information and data is still very limited and difficult



Source: Transparency International, 2022

Figure 6: Governance Effectiveness Index in Indonesia, Singapore, Malaysia, and China.

to find. Bai, G., & Hao, H also stated that ASN’s readiness is based on global insight, reflected in the increase in competency carried out by the government to continue to develop employee competency with training, development and skills improvement programs which have become the focus in preparing ASN for increasingly complex and diverse tasks. This includes training in management, information technology, leadership, and other aspects relevant to the delivery of superior public services [19].

Based on the Isa Adjani dalam Kumparan news article, ASN readiness based on the Networking aspect can be seen through a strong network, ASN can have better access to external resources such as knowledge, experience, or best practices [20]. ASNs can learn from other organizations’ experiences, collaborate on joint projects, or get support from experts outside the organization. ASN can use networks to jointly face complex challenges, such as issues of sustainable development, community welfare, or global problems. This network can be a forum for joint solutions and problem solving within a government bureaucracy, and/or outside the government bureaucracy. Meanwhile, ASN’s readiness to adopt technology and data analytics in its operations is a key factor in achieving world-class bureaucratic status. The application of SMART ASN has presented new methods for performance measurement and data-based decision making [20],[21],[22]. This development allows the government bureaucracy to become more responsive, efficient, and innovative in providing public services.

In this research, it is still limited to literary studies which are only collected from Google School and Scopus. In future research, researchers will develop it by determining the relationship and influence of success and failure factors in ASN towards world-class

bureaucracy using quantitative data. So that in the future it can provide new insights for academics, government, and civil servants to implement and develop technology-based talent management and analytical data.

4. Conclusion

From the 22 articles that have been collected, in this research it can be concluded that the application of technology, data analytics, regulations and laws in the context of talent management for State Civil Apparatus (ASN) in Indonesia creates a strong foundation for achieving efficiency, accountability and service quality a better public. The following are several concluding points that illustrate how these components can work together in the context of using technology as a talent management system based on analytical data that can facilitate talent search, performance tracking, and measurement of ASN competencies and achievements. Data analytics plays an important role in evidence-based decision making in talent management. By analyzing relevant data, government organizations can make more informed decisions in career development, assignments, and training of ASNs. Meanwhile, clear, and appropriate regulations and laws provide the legal basis for transparent and accountable talent management. However, ASN in Indonesia has not been able to regulate procedures for performance appraisals, promotions, assignments, and sanctions in cases of ethical or integrity violations. And ASN in Indonesia still needs to develop both in terms of technology and analytical data to become a world-class bureaucracy.

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