

---

# PROCEEDING OF RESEARCH AND CIVIL SOCIETY DESEMINATION (MANAGEMENT & BUSINESS CHALLENGES IN DIGITAL ERA)

ISSN 3024-8426, Volume 2, No. 1, Pages 236-243

DOI: <https://doi.org/10.37476/presed.v2i1.45>

---

## **An Analysis of the Challenges and Opportunities for Governance in Indonesia during the Digital Transformation of Public Organisations**

Hernawan<sup>1,\*</sup>; Indra Dharma Wijaya<sup>2</sup>

<sup>1</sup> Institut Teknologi dan Bisnis Nobel Indonesia, South Sulawesi, Indonesia

<sup>2</sup> Politeknik Negeri Malang, East Java, Indonesia

\*Correspondence: [hernawan@stia.nobel.ac.id](mailto:hernawan@stia.nobel.ac.id)

---

**Abstract:** The swift progress of digital technology has fundamentally transformed several industries, including governmental administrations, which are progressively embracing digital transformation to improve governance in Indonesia. Nevertheless, the incorporation of digital technology into the operations of the public sector brings up both obstacles and prospects that need meticulous scrutiny. The objective of this study is to investigate the effects of digital transformation on governance in Indonesian public organisations, with a specific emphasis on finding both significant obstacles and potential advantages. Employing a qualitative research methodology, data was gathered by means of comprehensive interviews conducted with government officials, experts in digital transformation, and policy analysts. The study also included the examination of pertinent government papers, policies, and strategic plans through document analysis. The results demonstrate that digital transformation presents substantial prospects for enhancing efficiency, transparency, and public service provision. However, it also presents obstacles such as reluctance to embrace change, insufficient digital literacy, and inadequate infrastructure. Moreover, the research emphasises the significance of leadership, organisational culture, and policy frameworks in effectively managing the process of digital transformation. The research indicates that in order for public organisations in Indonesia to fully exploit the possibilities offered by digital transformation, it is necessary to strategically prioritise the resolution of these issues through specific interventions, capacity development, and inclusive policy-making. This study offers significant insights for policymakers and public sector leaders who want to execute efficient digital transformation initiatives, ultimately resulting in more responsive and accountable government in Indonesia.

**Keywords:** Digital Transformation; Public Organisations; Governance

---

### **A. Introduction**

The swift advancement of digital technology has resulted in substantial transformations in several industrial sectors, including public institutions. In Indonesia, the implementation of digital

transformation in public organisations is considered a crucial measure to optimise governance and enhance the delivery of public services. However, this process is riddled with obstacles, including opposition to change, insufficient infrastructure, and a



Copyright © 2024 The Author

This is an open access article Under the Creative Commons Attribution (CC BY) 4.0 International License

deficiency of digital literacy among public sector public (Ahmed et al., 2020; Fang et al., 2022; Poss-Doering, Kuehn, Kamradt, Glassen, & Wensing, 2020; Shariman, Razak, & Noor, 2012). According to Andrade et al., (2022), the incorporation of technology in public organisations entails not only the use of digital technologies but also a transformation in the organisational culture and intellectual framework.

The present study utilises the Dynamic Capabilities Theory as its theoretical framework (Teece, Pisano, & Shuen, 1997). This theory asserts that organisations need to adjust, incorporate, and restructure their internal and external capabilities in order to effectively respond to swiftly evolving surroundings. This concept is especially pertinent in comprehending how public institutions in Indonesia might utilise digital transformation to surmount current governance complexities. The existing research underscores an expanding corpus of literature that investigates digital transformation in the public sector. However, there is a lack of emphasis on the particular obstacles and prospects encountered by public organisations in developing nations such as Indonesia (Prakasa, Raharjo, & Wiratama, 2020). Hence, the objective of this study is to address this deficiency by offering a thorough examination of the obstacles and possibilities linked to digital transformation in public organisations in Indonesia.

The primary aim of this study is to investigate the influence of digital transformation on governance in Indonesian public organisations, specifically by identifying significant obstacles and prospects. The objective of this study is to provide strategic analyses that can assist policymakers and public sector leaders in successfully implementing digital transformation projects.

## **B. Materials and Methods**

The present study employs a qualitative research methodology to investigate the obstacles and prospects linked to the process of digital transformation inside public organisations in Indonesia. The application of a qualitative methodology is appropriate for this study as it enables a comprehensive comprehension of the intricate and situational elements that impact the process of digital transformation (Creswell & Creswell, 2017). The study aims to collect comprehensive and detailed data in order to reveal the fundamental dynamics inherent in public organisations as they adapt to the digital transformation.

The research interviewees were chosen using purposive sampling, specifically targeting persons who possess firsthand knowledge with digital transformation projects in public organisations in Indonesia. The informants encompass government officials, policy makers, subject matter experts in digital transformation, and consultants engaged in the execution of digital strategies within the public sector (Patton, 2005). In order to obtain a wide range of viewpoints and thorough understanding of the research subject, a total of 20 informants were questioned.

Data collection was carried out using semi-structured interviews, which offered the adaptability to thoroughly investigate particular topics while enabling informants to freely articulate their opinions (Hardin, 2008). In addition, the investigation included document analysis of pertinent government reports, policy documents, and strategic plans to validate the information collected from interviews (Mishra & Alok, 2022). The integration of interviews and document analysis established a strong basis for comprehending the obstacles and possibilities in the digitalisation of public institutions.

Following Braun, Clarke, Boulton, Davey, & McEvoy (2021) framework, the data analysis was conducted using a thematic analysis method. This process entailed encoding the interview transcripts and documents, detecting recurring

patterns, and formulating themes that arose from the data. The objective of the investigation was to ascertain the primary obstacles and prospects associated with digital transformation, together with the initiatives implemented by public organisations to tackle these obstacles.

### **C. Result and Discussion**

#### **D. Result**

The results of this study indicate that the process of digital transformation in public organisation in Indonesia is characterised by a multifaceted combination of notable obstacles and prospects. An inherent obstacle that has been recognised is the profound opposition to change within the public sector, where conventional bureaucratic systems and inflexible cognitive frameworks greatly impede the acceptance and incorporation of new technologies. This opposition frequently arises from a long-established dependence on traditional approaches and a fear of unfamiliarity, which fosters an atmosphere where innovation is greeted with doubt. The resistance to change inside these organisations hinders the successful implementation of digital projects, since change is generally seen as disruptive rather than progressive.

Furthermore, alongside their reluctance to embrace change, numerous public institutions in Indonesia have challenges with insufficient digital infrastructure. Insufficient availability of contemporary, dependable, and secure technological infrastructure impedes the effective implementation of digital tools and services. The issue is exacerbated by the insufficient technical proficiency among staff, a significant number of whom lack the requisite abilities to run and oversee novel digital technologies. The skills deficit poses a substantial obstacle to the process of digital transformation, since it hinders public institutions from effectively harnessing the capabilities of digital technologies. The necessity for ongoing

training and development is crucial yet regularly disregarded in the effort to embrace digital solutions.

Moreover, the risks related to cybersecurity and data privacy provide significant obstacles to the process of digitally transforming governmental institutions in Indonesia. A significant number of organisations lack strong systems to safeguard sensitive data, rendering them susceptible to cyber assaults, according to the survey. The lack of comprehensive cybersecurity frameworks and the insufficient emphasis placed on safeguarding data worsen these weaknesses. Given the growing amount of data produced and processed by public organisations as they transition to digital operations, this problem is especially crucial. Preserving the confidentiality and privacy of this data is crucial for upholding public confidence and protecting the integrity of digital governance systems.

Notwithstanding these obstacles, the research emphasises some noteworthy prospects that digital revolution presents to governance in Indonesia. The implementation of digital technologies has the capacity to augment transparency in governmental procedures, optimise operations, and boost the provision of public services. By offering more accessible and responsive avenues for contact and feedback, digital platforms can enhance public involvement. Furthermore, the process of digital transformation has the potential to provide financial savings and enhance operational effectiveness through the automation of repetitive activities and the minimisation of human involvement. If these opportunities are strategically utilised, they have the potential to result in a more responsible and productive public sector.

The study highlights the significance of leadership, strategic planning, and investment in capacity development as crucial elements in surmounting the obstacles and optimising the possibilities of digital transformation. The report proposes that engaging government agencies,

commercial sector partners, and civil society in a collaborative approach is crucial for effectively managing the intricacies of digital transformation. Through cultivating collaborations and establishing a conducive environment, public institutions in Indonesia can attain enduring enhancements in governance. The findings give policymakers and public sector leaders with useful insights, presenting a roadmap to efficiently utilise digital transformation in order to achieve more responsive and accountable government.

## **Discussion**

This study's findings indicate that digital transformation in public organisations in Indonesia encounters notable obstacles, namely pertaining to resistance to change, insufficient infrastructure, and cybersecurity issues. The aforementioned issues align with prior studies that emphasise the limitations faced by public organisations during the shift from conventional to digital systems (Corsi, Pagani, Kovaleski, & Luiz, 2019; Na-Nan, Roppleam, & Wongsuwan, 2019; Neumeyer, Santos, & Morris, 2021). The deeply rooted bureaucratic culture of numerous Indonesian public institutions, marked by inflexible frameworks and hierarchical decision-making procedures, has led to a hesitancy to adopt technological innovations. Resistance to digital technologies sometimes arises from apprehension of disruption, limited knowledge of digital tools, and a perceived challenge to established power structures (Shafritz, Russell, Borick, & Hyde, 2017; Zekos, 2003). In order to overcome this opposition, it is necessary to implement not just technology advancements but also a culture transformation that promotes creativity and adaptability within the public sector (Corsi et al., 2019; Denhardt & Denhardt, 2000).

Furthermore, the research revealed that insufficient digital infrastructure not only hinders adaptability but also poses a

significant obstacle to achieving effective digital transformation. A significant number of public institutions in Indonesia do not possess the requisite technological infrastructure to facilitate the use of sophisticated digital technologies. These findings are consistent with previous research that highlight the crucial importance of infrastructure in facilitating digital transformation (Sheikh et al., 2021). The absence of dependable and up-to-date infrastructure poses challenges for public organisations in implementing and maintaining digital projects, therefore impeding their capacity to enhance service delivery and governance results. Furthermore, the lack of technical proficiency among personnel worsens these infrastructural issues, as a significant number of public sector workers lack the necessary abilities to efficiently operate and oversee digital system (Ebenso et al., 2021; Hou, Xu, & Chen, 2022; Kuziemski & Misuraca, 2020; Madyatmadja, Prabowo, & Kosala, 2017). The existence of this skills gap highlights the necessity of ongoing training and development of capabilities to guarantee that public organisations can effectively utilise the advantages of digital transformation.

Information security and data privacy issues add complexity to the digital transformation process in Indonesian governmental institutions. The results of the study emphasise the absence of strong cybersecurity protocols, therefore exposing public sector entities to the risk of data breaches and cyberattacks. The matter is of particular importance considering the growing volume of sensitive data handled by these organisations as they shift to digital platforms (Bagayoko et al., 2017). Prior studies have demonstrated that cybersecurity is frequently neglected in the haste to embrace new technologies, resulting in substantial flaws that weaken the overall efficiency of digital transformation initiatives (Alvarado, Lainfiesta, Paniagua-Avila, & Asturias, 2022). Public organisations must give priority to the creation and

implementation of comprehensive cybersecurity plans that safeguard both organisational data and the privacy of citizens in order to tackle these issues.

Notwithstanding these difficulties, the research also highlights significant prospects that digital transformation presents for enhancing governance in Indonesia. According to Seifert & Charness (2022), the implementation of digital technologies can improve transparency, optimise operations, and promote increased citizen participation, all of which are essential elements of effective governance. For instance, digital platforms have the potential to offer individuals more easily accessible and effective means of engaging with government services, therefore fostering accountability and responsiveness (Alghamdi & Alghamdi, 2022; Bello-Bravo et al., 2021; Kawale, Grant, & Pagliari, 2020; Pomputius, 2020). Moreover, the implementation of digital methods to automate repetitive administrative duties might result in financial savings and enhanced productivity, therefore enabling public institutions to deploy resources with greater effectiveness (Chen, Tang, & Xu, 2022; Lyu, Peng, Liu, & Hwang, 2022; Pariyasiri, 2022).

Existing research indicates that successfully addressing the obstacles of digital transformation in Indonesian public organisations necessitates a comprehensive strategy that incorporates technological, organisational, and cultural modifications. The role of leadership is crucial in facilitating these changes, since competent leaders have the ability to motivate a collective vision for digital transformation and cultivate an environment that encourages innovation (Alami et al., 2022; Brown, Fishenden, Thompson, & Venters, 2017; Weerakkody, Omar, El-Haddadeh, & Al-Busaidy, 2016). Furthermore, the cooperation of government agencies, the commercial sector, and civil society is crucial in order to establish a conducive atmosphere for digital transformation. By establishing alliances and exchanging exemplary methods, public

organisations may surmount the obstacles to digital transformation and take use of the possibilities it offers for improving governance.

## E. Conclusion

The study emphasises that the process of digital transformation in public organisations in Indonesia brings out notable obstacles as well as advantageous prospects. Key obstacles include reluctance to change caused by deeply rooted bureaucratic systems, insufficient digital infrastructure, and apprehensions about cybersecurity and data privacy. These challenges obstruct the efficient execution of digital projects, therefore negating the possible advantages of digital transformation. Nevertheless, the research also emphasises the significant possibilities that digital transformation presents for enhancing governance, including by increasing openness, efficiency, and citizen participation. The results indicate that surmounting these obstacles necessitates a comprehensive strategy that incorporates technological, organisational, and cultural transformations. Effective leadership, strategic planning, and cross-sector collaboration are essential for managing the intricacies of digital change. Finally, by effectively tackling these obstacles and capitalising on the possibilities, public institutions in Indonesia can attain a higher level of responsiveness, transparency, and accountability in their governance.

## References

- Ahmed, T., Rizvi, S. J. R., Rasheed, S., Iqbal, M., Bhuiya, A., Standing, H., ... Waldman, L. (2020). Digital Health and Inequalities in Access to Health Services in Bangladesh: Mixed Methods Study. *JMIR MHealth and UHealth*, 8(7), e16473. <https://doi.org/10.2196/16473>
- Alami, H., Lehoux, P., Shaw, S. E., Papoutsi,

- C., Rybczynska-Bunt, S., & Fortin, J.-P. (2022). Virtual Care and the Inverse Care Law: Implications for Policy, Practice, Research, Public and Patients. *International Journal of Environmental Research and Public Health*, 19(17), 10591. <https://doi.org/10.3390/ijerph191710591>
- Alghamdi, N. S., & Alghamdi, S. M. (2022). The Role of Digital Technology in Curbing COVID-19. *International Journal of Environmental Research and Public Health*, 19(14), 8287. <https://doi.org/10.3390/ijerph19148287>
- Alvarado, J. R., Lainfiesta, X., Paniagua-Avila, A., & Asturias, G. (2022). Developing a Digital Technology System to Address COVID-19 Health Needs in Guatemala: A Scientific Diaspora Case Study. *Frontiers in Research Metrics and Analytics*, 7, 899611. <https://doi.org/10.3389/frma.2022.899611>
- Andrade, A. Q., Calabretto, J.-P., Pratt, N. L., Kalisch-Ellett, L. M., Kassie, G. M., LeBlanc, V. T., ... Roughead, E. E. (2022). Implementation and Evaluation of a Digitally Enabled Precision Public Health Intervention to Reduce Inappropriate Gabapentinoid Prescription: Cluster Randomized Controlled Trial. *Journal of Medical Internet Research*, 24(1), e33873. <https://doi.org/10.2196/33873>
- Bagayoko, C.-O., Bediang, G., Anne, A., Niang, M., Traoré, A.-K., & Geissbuhler, A. (2017). Digital health and the need to develop centers of expertise in Sub-Saharan Africa: Two examples in Mali and Cameroon. *Medecine et Sante Tropicales*, 27(4), 348–353. <https://doi.org/10.1684/mst.2017.0726>
- Bello-Bravo, J., Brooks, I., Lutomia, A. N., Bohonos, J., Medendorp, J., & Pittendrigh, B. (2021). Breaking out: the turning point in learning using mobile technology. *Heliyon*, 7(3), e06595. <https://doi.org/10.1016/j.heliyon.2021.e06595>
- Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2021). The online survey as a qualitative research tool. *International Journal of Social Research Methodology*, 24(6), 641–654.
- Brown, A., Fishenden, J., Thompson, M., & Venters, W. (2017). Appraising the impact and role of platform models and Government as a Platform (GaaP) in UK Government public service reform: Towards a Platform Assessment Framework (PAF). *Government Information Quarterly*, 34(2), 167–182. <https://doi.org/https://doi.org/10.1016/j.giq.2017.03.003>
- Chen, X., Tang, X., & Xu, X. (2022). Digital technology-driven smart society governance mechanism and practice exploration. *Frontiers of Engineering Management*, 1–20. <https://doi.org/10.1007/s42524-022-0200-x>
- Corsi, A., Pagani, R. N., Kovaleski, J. L., & Luiz, V. (2019). Technology transfer for sustainable development: Social impacts depicted and some other answers to a few questions. *Journal of Cleaner Production*, 118522. <https://doi.org/10.1016/j.jclepro.2019.118522>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Denhardt, R. B., & Denhardt, J. V. (2000). The new public service: Serving rather than steering. *Public Administration*

- Review*, 60(6), 549–559.  
<https://doi.org/10.1111/0033-3352.00117>
- Ebenso, B., Okusanya, B., Okunade, K., Akeju, D., Ajepe, A., Akaba, G. O., ... Allsop, M. J. (2021). What Are the Contextual Enablers and Impacts of Using Digital Technology to Extend Maternal and Child Health Services to Rural Areas? Findings of a Qualitative Study From Nigeria. *Frontiers in Global Women's Health*, 2, 670494. <https://doi.org/10.3389/fgwh.2021.670494>
- Fang, M. L., Walker, M., Wong, K. L. Y., Sixsmith, J., Remund, L., & Sixsmith, A. (2022). Future of digital health and community care: Exploring intended positive impacts and unintended negative consequences of COVID-19. *Healthcare Management Forum*, 35(5), 279–285. <https://doi.org/10.1177/08404704221107362>
- Hardin, R. (2008). Normative Methodology. *The Oxford Handbook of Political Methodology*, (September), 1–14. <https://doi.org/10.1093/oxfordhb/9780199286546.003.0002>
- Hou, Y., Xu, L., & Chen, L. (2022). Hotspots and Cutting-Edge Visual Analysis of Digital Museum in China Using Data Mining Technology. *Computational Intelligence and Neuroscience*, 2022, 7702098. <https://doi.org/10.1155/2022/7702098>
- Kawale, P., Grant, L., & Pagliari, C. (2020). Digital health and financial good-governance: a mixed methods study of patient revenue capture in Malawi. *Journal of Global Health Reports*, 4. <https://doi.org/10.29392/001c.12258>
- Kuziemski, M., & Misuraca, G. (2020). AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings. *Telecommunications Policy*, 44(6), 101976. <https://doi.org/10.1016/j.telpol.2020.101976>
- Lyu, Y., Peng, Y., Liu, H., & Hwang, J.-J. (2022). Impact of Digital Economy on the Provision Efficiency for Public Health Services: Empirical Study of 31 Provinces in China. *International Journal of Environmental Research and Public Health*, 19(10), 5978. <https://doi.org/10.3390/ijerph19105978>
- Madyatmadja, E. D., Prabowo, H., & Kosala, R. (2017). IT Governance in digital era in Jakarta Provincial Government. *Proceedings of 2016 International Conference on Information Management and Technology, ICIMTech 2016*, 155–158. School of Information Systems, Bina Nusantara University, Jakarta, Indonesia: Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICIMTech.2016.7930321>
- Mishra, S. B., & Alok, S. (2022). *Handbook of research methodology*. Educreation publishing.
- Na-Nan, K., Roopleam, T., & Wongsuwan, N. (2019). Validation of a digital intelligence quotient questionnaire for employee of small and medium-sized Thai enterprises using exploratory and confirmatory factor analysis. *Kybernetes*. <https://doi.org/10.1108/K-01-2019-0053>
- Neumeyer, X., Santos, S. C., & Morris, M. H. (2021). Overcoming barriers to technology adoption when fostering entrepreneurship among the poor: The role of technology and digital literacy. *IEEE Transactions on Engineering Management*, 68(6), 1605–1618. <https://doi.org/10.1109/TEM.2020.2>

- 989740
- Pariyasiri, A. (2022). Digital Transformation of Public Service by MAEHIA Municipality. *International Conference on Digital Government Technology and Innovation, DGTi-Con 2022 - Proceedings*, 60–65. Maehia Municipality, Chiang Mai, Thailand: Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/DGTi-CON53875.2022.9849201>
- Patton, M. Q. (2005). Qualitative research. In *Encyclopedia of statistics in behavioral science*. Wiley Online Library.
- Pomputius, A. (2020). Assistive Technology and Software to Support Accessibility. *Medical Reference Services Quarterly*, 39(2), 203–210. <https://doi.org/10.1080/02763869.2020.1744380>
- Poss-Doering, R., Kuehn, L., Kamradt, M., Glassen, K., & Wensing, M. (2020). Applying Digital Information Delivery to Convert Habits of Antibiotic Use in Primary Care in Germany: Mixed-Methods Study. *Journal of Medical Internet Research*, 22(10), e18200. <https://doi.org/10.2196/18200>
- Prakasa, Y., Raharjo, K., & Wiratama, I. D. (2020). *Transformational Leadership and Digital Maturity: The Mediating Role of Organizational Culture*. 154(AICoBPA 2019), 224–229.
- Seifert, A., & Charness, N. (2022). Digital transformation of everyday lives of older Swiss adults: use of and attitudes toward current and future digital services. *European Journal of Ageing*, 19(3), 729–739. <https://doi.org/10.1007/s10433-021-00677-9>
- Shafritz, J. M., Russell, E. W., Borick, C. P., & Hyde, A. C. (2017). *Introducing public administration*. New York and London: Routledge Taylor & Francis Group. <https://doi.org/10.1080/00922013.1975.11000035>
- Shariman, T. P. N. T., Razak, N. A., & Noor, N. F. M. (2012). Digital Literacy Competence for Academic Needs: An Analysis of Malaysian Students in Three Universities. *Procedia - Social and Behavioral Sciences*, 69, 1489–1496. <https://doi.org/https://doi.org/10.1016/j.sbspro.2012.12.090>
- Sheikh, A., Anderson, M., Albala, S., Casadei, B., Franklin, B. D., Richards, M., ... Mossialos, E. (2021). Health information technology and digital innovation for national learning health and care systems. *The Lancet Digital Health*, 3(6), e383–e396. [https://doi.org/10.1016/s2589-7500\(21\)00005-4](https://doi.org/10.1016/s2589-7500(21)00005-4)
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. <https://doi.org/10.1093/0199248540.003.0013>
- Weerakkody, V., Omar, A., El-Haddadeh, R., & Al-Busaidy, M. (2016). Digitally-enabled service transformation in the public sector: The lure of institutional pressure and strategic response towards change. *Government Information Quarterly*, 33(4), 658–668. <https://doi.org/https://doi.org/10.1016/j.giq.2016.06.006>
- Zekos, G. I. (2003). MNEs, globalisation and digital economy: legal and economic aspects. *Managerial Law*, 45(1/2), 1–296. <https://doi.org/10.1108/03090550310770875>