

# **The Influence of Change Management, IT Infrastructure Capability, and Knowledge Management on Digital Transformation Success in Healthcare Units**

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## **Abstract**

The research reviewed the influence of change management, IT infrastructure, and knowledge management on the health units' sector in Indonesia. A quantitative, explanatory research design along with a survey research method was employed to carry out this study, where data were obtained from a sample of 180 staff and managers in hospitals, community health centers and clinics with integrated digitized health systems. Some of the respondents were chosen through purposive sampling, mainly those who were directly involved in the digitization process in the health sector. In the end, the three variables were all found to have positively and significantly influenced the success of the digital transformation. Hence, the success of digital transformation depends on the effective management of change, the quality of the infrastructure, and the organization's knowledge stock and flow the capability to capture, process, and disseminate knowledge.

**Keywords:** change management, IT infrastructure capability, knowledge management, digital transformation.

## **INTRODUCTION**

The call for the digital transformation is a necessity that concerns all types of organizations, even those in the health sector. The use of integrated digital technologies in health facilities not only makes a facility more efficient but also helps to maintain accurate medical records, and in general, makes the patient care process better (Bakri et al., 2023). The right digital transformation in healthcare increases the healthcare professionals' performance, makes the decision process faster, and improves management transparency. The health 4.0 era is emphasizing the need for digitizing work processes such as the use of electronic health records (EHRs), telemedicine, and hospital information systems (Susilowati et al., 2025). This, in turn, leads to better competitiveness, patient satisfaction, and overall productivity towards the achievement of the set objectives (Rachman et al., 2024; Judijanto et al., 2023). However, many healthcare organizations still grapple with digital transformation due to inadequate IT infrastructure, problems with knowledge management, and resistance to change (Hendratni, 2025). This highlights the need to study the drivers of successful digital transformation in

healthcare facilities to guarantee the integration of advanced technologies provides real value to the organization and the people it serves (Tannady & Dewi, 2024).

Managing change effectively is one of the most critical elements in the success of digital transformation (Mulyadi et al., 2024). Since digital transformation is ultimately the adoption of new technologies and the organization of the other elements structure, culture, and behavior of work around those technologies, it is also a change process. For healthcare units, the management of change is particularly challenging as it involves medical and non-medical personnel, administrators, and management, each with a different level of technological adoption (Riyanti et al., 2025). Carefully designed and executed change management strategies will counter a big portion of the resistance to the adoption of new technologies, facilitate the flow of digital transformation discourse toward the various levels of the organization, and foster the collective consent toward the cohesion of the transformation (Santoso et al., 2025). Besides change management, the capabilities of digital IT infrastructures also determine the success of digital transformation (Rahayu et al., 2019). These include the communication networks, the reliability of the different information systems, and the integration of systems across various platforms (Daud et al., 2025). Apart from change management and IT infrastructure, digital transformation also relies on the management of knowledge and information as a critical resource. In healthcare systems, a knowledge management system allows clinicians and administrators to collaboratively share vital medical data, research, and other information on patient care to eliminate work duplication, streamline clinical processes, and improve the organization and accuracy of diagnoses (Erliyani et al., 2025).

This background gives this study the opportunity to investigate how change management, IT infrastructure capabilities, and knowledge management influence the success of digital transformation in Indonesia's healthcare sector. Theoretically, this study contributes to the literature on strategic management of the public and healthcare information systems, specifically the innovations and digital technologies in the public and healthcare systems. Besides, this study contributes to the contextual application of Dynamic Capability and Knowledge-Based View by including change management, IT infrastructure, and knowledge as fundamental elements in the literature to aid achieving digital transformation. From a practical perspective, this study would help healthcare leaders in the frontline digital strategies for psychological and physical workforce preparation, digital adoption, and outcome-focused technology investments that improve service quality.

## METHOD

The present research design was influenced by a quantitative explanatory approach. The study population consisted of employees and managers from various healthcare facilities, including hospitals, community health centers, and private clinics. The clinics had digital systems like Hospital Information Systems (HIS) and Electronic Health Records (EHR) or app-based patient care platforms. A total of 180 respondents were picked using directed sampling from this subject group. The sample selection criteria for consideration should be a minimum of one year of working in a healthcare institution that has undergone digital transformation, being a direct user of the institution's digital systems, and having a clear understanding of the internal policies related to organizational change and knowledge management. Multiple linear regression was used in the research for analysis to figure out how multiple independent variables affect the dependent variable both simultaneously and individually. The overall significance of the model was gauged by the F-test, whereas the t-test was used to check the individual influences of the variables related to the success of digital transformation. The

extent to which the independent variables explain the dependent variable digital transformation success was measured by the coefficient of determination ( $R^2$ ).

## RESULT AND DISCUSSION

The result of multiple linear regression analyses for this research model indicates that the model is significant simultaneously. This is in line with a calculated F-value of 58.47 which is also greater than the F-table value of 3.05 at the  $0.000 < 0.05$  significance level. This implies that change management, IT infrastructure capability, and knowledge management significantly influence the success of digital transformation in healthcare units in combination. In relation to the value of the coefficient of determination ( $R^2$ ) of 0.72, it implies that 72% of digital transformation success is explained by the 3 independent variables. The remaining 28% is left unaccounted for by variables outside the model like digital leadership, organizational culture, and government policy support. Furthermore, this is also the case which the t-test suggests, as also each independent variable is shown to have a calculated t-value which is higher than the t-table (1.97) with  $< 0.05$  significance level, thus, meaning all variables have a partial significant influence as well. This implies that the success of digital transformation in the healthcare sector relies on the synergy of human readiness, organizational systems, and technological capabilities.

There is a strong and favorable effect of change management on successful digital transformation of healthcare units. Effectively change managed processes result in greater achievement of successful digital transformation. In this scope, change management is the technology adaption process in the organization and the active participation of the Visionary Leader and all organizational employees. Many healthcare units fail digital transformation in the absence of technology not because of technology deficiencies, but mainly because of internal change resistance. Building an innovative culture and trust in new systems is a crucial organizational readiness in organizational digital change management and dynamics of digitalized organization. In addition, supportive training and emotionally supportive leaders aid medical and administrative audiences perceiving digital transformation as a means of enhancing the quality of patient care. This is consistent with the theory of Kotter's Change Model Wherein Creating Urgency, forming change teams, and behavioral reinforcement are crucial for organizational change sustainability. Finally, the conclusion is that change management in the organization and determining strategy is the essence of successful digital transformation in the healthcare sector. Technology is an important component, however, investing in technology is not enough.

The data suggest that having strong IT capabilities positively and highly affect the success rate of digital transformation. A strong infrastructural base is critical to supporting a complete system of digitalization within healthcare units. Integrated and strong IT infrastructures involve the entire range of a healthcare organization's operations – network reliability, cybersecurity, data storage capacity, system interoperability, and the speed of access to and the flow of information among disparate work units. In practical terms, hospitals or community health centers that possess adequate technological organizations can respond to the varying levels of patient needs in a quick, clear, and highly responsive manner. In addition, flexible infrastructures enhance cross-system integration of disparity of clinical data and telemedicine digital tools, such as EHRs. As such, strengthening IT infrastructures should be viewed as a healthcare system strategic goal in order to provide a highly flexible and responsive digital health system.

In this study, knowledge management positively and significantly influences the success of digital transformation in healthcare units. These results validate that the success of digital transformation relies not only on technology, but also the organization's knowledge management capability. Through a knowledge management system, work experiences, medical information, and service innovations are put together, stored, and shared which, in effect, makes decision-making faster and more accurate. In the medical field, knowledge management is a tool that allows medical practitioners to share information about diagnoses, clinical interventions, and the latest patient care developments. The outcome aligns with the Knowledge-Based View (KBV) theory that treats knowledge as an essential resource of an organization. Incorporating healthcare information systems with a culture of sharing knowledge, healthcare organizations can achieve higher levels of innovation, operational efficiency, and service delivery precision. Consequently, the public sector, particularly healthcare, will revolve around knowledge management in the continuation of the digital transformation.

## CONCLUSION

The results show that the Indonesian healthcare sector is a prime example of how a digital transformation can be a success if change management is handled well, IT infrastructures are up to the task, and knowledge management is practiced. The success, in turn, refers to these as the main factors for the advanced technological support systems, the readiness of the organization for the change, and the internal knowledge structures. Besides that, the ongoing development of an organization's adaptable work culture through management and IT change structures serves the organization as a stabilizing and efficient factor. Knowledge management, which includes collaborative learning and innovation cycles, occupies a secure place among digitally processed IT change structures. In order to have healthcare sector progress, change management in change management focused frameworks should be considered as the basis for employee engagement and the main channel of organizational communication for the purpose of resistance alleviation. Moreover, IT spending should exceed basic hardware and software infrastructures to encompass advanced data security frameworks and cross-unit system interoperability. In conclusion, the company operations, which depend on the employees sharing their knowledge, will need a collaborative system engineered to propel integrated knowledge-driven workflows.

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