*Competence : Journal of Management Studies,*
Vol 17 No 2, Oktober 2023
ISSN: 2541-2655 (Online) dan ISSN: 1907-4824 (Print

# BUSINESS STRATEGY ANALYSIS FOR PRIVATE HOSPITALS AMID A DIGITAL TRANSFORMATION (CASE STUDY OF RUMAH SAKIT MKK)

**Hanifa Qurratuaini[1], Santi Novani[2]**
Master of Business Administration Program, Institut Teknologi Bandung
Email : hanifa_qurratuaini@sbm-itb.ac.id

**ABSTRACT**

The purpose of this research is to investigate and analyze the current status of digital medical records in Rumah Sakit MKK and the readiness of healthcare professionals toward a digital transformation, to identify the challenges and barriers the hospital faces in digitizing its medical records and implementing a digital transformation, to evaluate the benefits and potential impact of digitizing medical records on Rumah Sakit MKK, and to provide recommendations and guidelines for other hospitals in Indonesia to successfully implement a digital transformation and improve their healthcare services. This study primarily employs qualitative methods to examine diverse viewpoints, pinpoint systemic challenges, and develop actionable remedies concerning the digital transformation of Rumah Sakit MKK. The primary methodology employed will be SSM (Soft System Methodology). The results showed that the current digital ecosystem combines physical and digital medical records, with the hospital still storing many physical medical records. The benefits of fully digitizing medical records in Rumah Sakit MKK are as streamlined processes, reduced expenses, improved operational efficiency, and stablished connectivity with Satusehat, a central government platform for digital medical records, thus complying with government regulations. The challenges faced by Rumah Sakit MKK in digitizing medical records is procurement challenge related to additional servers and PCs needed to support the digitization process, staff skillsets challenge related to the inadequate IT skills, particularly among older medical staff, and communication challenge to ensure that every stakeholders are aware of the transformation. The strategies defined to ensure a smooth digital transformation at Rumah Sakit MKK is facilitate the storage, management, and controlled access to medical records, involve key stakeholders, operate while following government regulations, guaranteeing data security, maintaining confidentiality, and adhering to healthcare standards, establish connectivity with Satusehat, a central government platform for digital medical records, encompass both physical and digital medical record storage, and constrained by government regulations, industry standards, technological advancements, and the imperative for interoperability within the healthcare sector.

Keywords: business strategy, private hospitals, digital transformation

## INTRODUCTION

The healthcare industry in Indonesia faces several challenges, such as inadequate funding, insufficient medical infrastructure, and a shortage of healthcare

professionals. Additionally, the COVID-19 pandemic has greatly strained Indonesia's healthcare system. The pandemic has highlighted the need for improved healthcare infrastructure, greater access to medical supplies and equipment, and increased investment in the healthcare workforce. To address these challenges, the Indonesian government has implemented several initiatives to improve the country's healthcare industry. These include the national health insurance program, Jaminan Kesehatan Nasional (JKN), which aims to provide all citizens with affordable and comprehensive healthcare coverage. The government has also invested in improving medical infrastructure and facilities, particularly in rural areas, and has introduced measures to increase the number of healthcare professionals.

One initiative proposed by the government is the development of SATUSEHAT (will be referred to as Satusehat henceforth) Dashboard. Satusehat Dashboard is the center of healthcare data in Indonesia, presenting interactive information as a dashboard. It was built and developed as a single health information portal in Indonesia for both the public and the internal scope of the Ministry of Health. This portal was created to solve the problem where health dashboards/information are currently scattered in various locations (Vila et al., 2018). Therefore, a single portal is expected to facilitate the Ministry of Health and the general public access to information. The Satusehat Dashboard utilizes various high-quality data sources to support decision-making, structured policy formulation, and information delivery to the public. The dashboard publication makes it easy for Indonesians to obtain various health data and information interactively. However, a pressing challenge must be addressed to ensure accurate data recording. All medical institutions and hospitals in Indonesia must digitize their patients' medical records. This presents a significant challenge as most institutions still rely on physical records. Consequently, a digital transformation of Indonesia's healthcare industry is necessary (Afrizal et al., 2019).

MK Hospital Group is Indonesia's leading private healthcare service provider, established in 1989. The company is committed to providing high-quality healthcare services to the community. It has a network of hospitals offering advanced medical technology and facilities and a team of highly qualified and experienced medical professionals. MK Hospital Group's services cover various medical specialties, including general medicine, surgery, obstetrics and gynecology, pediatrics, cardiology, and more. The company's mission is to be a trusted partner in the community's health, providing services and treatments enabling them to live full lives with love and happiness. MK Hospital Group values innovation, integrity, teamwork, and compassion as its guiding principles. The company is committed to continuously improving its healthcare services, adopting the latest medical technology, and adhering to the highest patient safety and quality of care standards. Additionally, the company places great importance on promoting the community's well-being through various social responsibility programs (Bhattacharya et al., 2009).

MK Hospital Group started as a simple maternity hospital with a capacity of 35 beds in Jakarta in 1989. The company officially became a legal entity in 1995 and has a strong commitment to excellence in healthcare and dedication to community well-being, which enabled it to grow into a leading community hospital operator in Indonesia, serving mainly the most attractive market in Indonesia in the Jabodetabek area and Surabaya city. Currently, the MK Hospital Group network includes over 20 hospitals, serving 202.9 thousand inpatients and 2.3 million outpatients, with 1,782

doctors, 5,964 medical personnel, and 1,795 non-medical employees at the end of 2021. MK Hospital Group's strong commitment to excellence in healthcare and its dedication to community well-being make it a leading healthcare service provider in Indonesia. As a result of constraints on resources, this final project will concentrate on a single hospital within the MK Hospital Group, specifically Rumah Sakit MKK. Established in 1998, this hospital has gained recognition as one of the referral hospitals for the Asian Games 2018.

Under regulations stipulated by Kemenkes (Kementerian Kesehatan), all medical institutions and hospitals operating in Indonesia are mandated to digitally archive their patients' medical records (Hapiffah & Sinaga, 2020). This mandate is specified in the "Peraturan Menteri Kesehatan Republik Indonesia No 24 Tahun 2022, Tentang Rekam Medis - Pasal 45". Furthermore, the government requires hospitals to routinely synchronize their digital medical records with the Satusehat platform, owned by the government. The digitization of medical records marks a pivotal initial step towards harnessing the power of machine learning to improve the healthcare industry (Panesar, 2019). However, there are several challenges impeding the digital transformation of hospitals. One prominent obstacle is that although the hospital has implemented an information management system for its existing business practices, a substantial portion of patients' health and medical records is still stored in paper-based or physical formats, necessitating a time-consuming digitization process (Serobatse, 2013). Furthermore, the lack of universal technological proficiency among medical professionals poses an additional challenge in the path toward digital transformation (Solberg et al., 2020).

As a member of the esteemed MK Hospital group, Rumah Sakit MKK is dedicated to providing the community with comprehensive healthcare services and treatments that enable them to live fulfilling lives with love and happiness. The hospital will serve as the research subject for our final project as we strive to contribute to advancing medical technology and knowledge. The author will use the hospital's current digital ecosystem to identify the business issues and propose a suitable roadmap for digital transformation.

## RESEARCH METHODOLOGY

This study primarily employs qualitative methods to examine diverse viewpoints, pinpoint systemic challenges, and develop actionable remedies concerning the digital transformation of Rumah Sakit MKK. The primary methodology employed will be SSM (Soft System Methodology). Furthermore, the study will include straightforward interviews with the company's IT and management team members to gain deeper insights into the hospital's existing and future IT landscape and its impact on its business direction.

## RESULTS AND DISCUSSION

### Data Categorization

After collecting interview data, the next stage in SSM is categorizing this information. This stage is necessary for uncovering patterns and gaining valuable insights into medical record storage.

Table 1. Data Categorization

| No | Category | Sub-Category | Data |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | Current System Processes | Quantity of Medical Records | 1. Based on the interview results, we learned that there are over 50,000 types of medical records estimated to be available.<br>2. The large quantity underscores the need for efficient and organized storage solutions. |
| | | Storage Location | The medical records are stored in a centralized and designated room within the hospital. |
| | | Access Restrictions and Procedures | 1. Access to the storage room is restricted to specific personnel.<br>2. This limitation ensures that only authorized individuals can enter the storage area.<br>3. This is a crucial security measure to protect sensitive medical information and maintain patient confidentiality. |
| | | Entry Logs | 1. To further enhance security and accountability, entry logs are maintained.<br>2. These logs record details, such as the date, time, and identity of individuals entering the storage room. |
| | | Retention Period | 1. Physical medical records are retained for a period of 5 years, as mandated by government regulations. |
| | | Transfer to Central Warehouse | 1. After the 5-year retention period, medical records are transferred to a central warehouse.<br>2. This consolidation process involves bringing together data from various hospitals within the group. |
| 2 | Personnel Perspectives | Stakeholder Opinions | Perspectives from various stakeholders provide valuable insights into how different roles within the healthcare system perceive the ongoing processes and changes. This includes<br>1. The hospital director<br>2. The IT team<br>3. Medical staff perspectives<br>4. Administrators<br>Additionally, external perspectives, such as the board of directors of the hospital group, should also be taken into account. |

| | | | |
|---|---|---|---|
| | | Challenges Faced | 1. Challenges raised during the interview include resistance to digital transformation, particularly among older medical staff who may have inadequate IT skills.<br>2. Measures to address these challenges include conducting training sessions and multiple reviews to enhance IT skills among medical staff.<br>3. The communication strategy involves issuing warning letters in collaboration with resistant staff and management. |
| 3 | Digital Transformation Strategies | Communication Strategies | 1. The communication strategy involves engaging healthcare staff effectively.<br>2. This is achieved by appointing a Point of Contact (PIC) from each division to liaise between the IT team and staff.<br>3. The PIC is crucial in coordinating training sessions, addressing concerns, and facilitating smooth communication.<br>4. This approach ensures that information is conveyed in a targeted and department-specific manner, fostering better understanding and collaboration. |
| | | Training Programs | The training programs are designed to equip personnel with the necessary skills for the digital transformation.<br>Various types of training are identified, including:<br>1. System Orientation: Introduction to the digital medical record system, its features, interface, and basic functionalities.<br>2. Navigation Training: Instructions on navigating through the system, understanding menus, and locating patient records.<br>3. Data Entry and Retrieval: Training on accurate and efficient entry, retrieval, and updating of patient information.<br>4. Security and Privacy Training: Emphasizing the importance of data security and privacy, and providing training on system security features.<br>5. Workflow Integration: Integrating |

| | | | |
|---|---|---|---|
| | | | the digital system into daily workflows for enhanced efficiency.<br>6. Emergency Preparedness:<br>Preparing staff for using the system in emergency situations.<br>The training is tailored to meet the diverse needs of different personnel within the hospital.<br>It includes hands-on sessions and training booklets, and the effectiveness is measured through review sessions after hands-on training.<br>The focus on continuous training and adaptation to outcomes ensures ongoing skill development. |
| | | Security Measures | The strategy for ensuring the security of the digital medical record information involves several key steps:<br>1. Authorized Access:<br>a. Restricting data access to specific departments, controlled by the IT team and the Director.<br>b. Different access types are implemented, involving a request ticket process overseen by the PIC and IT team.<br>2. Preventing Theft or Hacking:<br>a. Implementing limited access, including restricted access to the storage room and controlled data access.<br>b. Medical staff requires permission from the IT team or division/department heads.<br>c. Additional security measures include antivirus software integration and prohibiting external hard disk usage.<br>3. Data Backup Strategy:<br>a. Implementing a robust data backup strategy with daily backups on two different servers and a three-month retention period to minimize the risk of data loss. |
| 4 | Challenges and Risks | Transition Challenges | Several things need to be considered before conducting digital transformation are as follows:<br>1. Infrastructure Requirements: |

| | |
|---|---|
| | a. Additional servers and PCs needs to be procured to support the digitization process.<br>2. System Failure Solutions:<br>a. Regular hardware updates every 4-5 years need to be implemented to ensure the reliability and efficiency of the digital system.<br>b. Additionally, backup physical servers need to be set up, with one serving as a backup.<br>c. Daily backups with a three-month retention period will be conducted to mitigate potential data loss. |
| IT Skills Improvement | 1. The challenge of inadequate IT skills, particularly among older medical staff, is acknowledged.<br>2. To address this challenge, training sessions are conducted, and performances are reviewed multiple times to enhance IT skills among medical staff. |
| Communication Between IT and Medical Professionals | 1. Procedures are established for submitting request tickets for IT assistance, with Service Level Agreements (SLAs) dictating resolution timeframes.<br>2. Urgent issues, such as doctors' patient data input problems, target a 30-minute resolution, while general issues aim for an 8-hour resolution. |

By organizing the data into meaningful categories, we aim to identify key themes and pave the way for strategic improvements in the overall system.

**Real-World Situation Comparison**

In this step, we will use the analysis results to construct conceptual models representing different perspectives of the problem. The conceptual models will help us understand various aspects and interactions within the medical record storage and management system at Rumah Sakit MKK.

Table 2. Real-World Situation Comparison

| **Activity** | **Real-World Comparison** | **Observation/Assessment** | **Recommended Improvement** |
|---|---|---|---|
| Facilitate the storage, management, and controlled access to medical records. | ● At the moment, over 50,000 types of physical medical records are stored in a designated room within the hospital.<br>● Access is restricted, and procedures are in place for storing, organizing, and transferring records to a central warehouse after the 5-year storage period. | ● The real-world situation aligns with the root definition.<br>● The hospital is actively involved in storing, managing, and controlling access to medical records. | ● Implement a robust electronic document management system (EDMS) for efficient digital record storage and retrieval.<br>● Regularly assess the access control measures to ensure they align with evolving security standards. |
| Involve key actors such as the Hospital Director, Management Board, IT Team, Medical Staff, Administrators, Central Hospital Group, IT Vendors, and Patients. | The information specifies the involvement of internal participants such as the hospital director, management board, IT team, medical staff, administrators, and external parties like the central hospital group, IT vendors, and patients. | The real-world situation is consistent with the involvement of key actors as identified in the root definition. | ● Foster regular communication and collaboration among key actors.<br>● Establish a feedback mechanism to gather input from all stakeholders for continuous improvement. |
| Operate while following government regulations, guaranteeing data security, maintaining confidentiality, and adhering to healthcare standards. | ● The hospital follows government regulations for the retention period of medical records, has measures in place for data security, and emphasizes confidentiality.<br>● Compliance with government regulations and certifications is a priority. | The real-world situation aligns with the need to operate while adhering to government regulations, ensuring data security, and maintaining confidentiality. | ● Conduct regular compliance audits to ensure adherence to government regulations.<br>● Implement advanced cybersecurity measures, including regular penetration testing, to stay ahead of evolving threats. |

| | | | |
|---|---|---|---|
| Establish connectivity with Satusehat, a central government platform for digital medical records. | The information outlines steps for integration with the Satusehat platform to achieve benefits such as smooth information sharing, efficiency boost, eliminating redundancy, standardized formats, and compliance with national digital health goals. | The real-world situation corresponds to the goal of establishing connectivity with Satusehat, as identified in the root definition. | ● Ensure continuous monitoring of updates and changes on the Satusehat platform.<br>● Establish a dedicated team to manage and optimize integration processes for seamless data exchange. |
| Encompass both physical and digital medical record storage, with a particular emphasis on transitioning to digital records. | ● The hospital employs both physical and digital storage for medical records.<br>● There's a clear emphasis on digital transformation, with benefits such as streamlined processes, reduced expenses, and improved operational efficiency outlined. | The real-world situation aligns with the need to encompass both physical and digital storage, focusing on the transition to digital records as per the root definition. | ● Accelerate the digital transformation process by providing targeted training programs to medical staff.<br>● Implement incentives for departments that actively contribute to the transition and share success stories. |
| Constrained by government regulations, industry standards, technological advancements, and the imperative for interoperability within the healthcare sector. | ● The hospital recognizes constraints such as government regulations, industry standards, and the need for interoperability.<br>● Measures are in place to ensure compliance, certifications, and ongoing adaptation to regulation changes. | The real-world situation corresponds to the constraints identified in the root definition, and the hospital is actively managing and adapting to these constraints. | ● Invest in ongoing training programs to keep staff abreast of technological advancements and interoperability requirements.<br>● Establish a task force to regularly review and adapt to changes in government regulations and industry standards. |

**Business Solution Definition**

This stage involves implementing changes that align with both systemic desirability and cultural feasibility. It focuses on evaluating and incorporating the model recommendations into real systems, comparing them systematically with conceptual models. The goal is to identify both beneficial and culturally acceptable changes from a systemic perspective, thus defining the business solutions.

Table 3. Business Solution Definition

| Activity | Cultural Changes | System Changes |
|---|---|---|
| Facilitate the storage, management, and controlled access to medical records. | Foster a culture of continuous improvement and adaptability, encouraging staff to embrace new technologies like an electronic document management system (EDMS). | Implement an electronic document management system (EDMS) to enhance the efficiency of storing and retrieving medical records. |
| Involve key actors such as the Hospital Director, Management Board, IT Team, Medical Staff, Administrators, Central Hospital Group, IT Vendors, and Patients. | Establish a culture of open communication and collaboration, where feedback is actively sought and considered from all stakeholders | Establish a structured feedback mechanism and communication platform to facilitate regular interaction among key actors. |
| Operate while following government regulations, guaranteeing data security, maintaining confidentiality, and adhering to healthcare standards. | Promote a culture of compliance and cybersecurity awareness among staff, emphasizing the importance of adhering to regulations and actively participating in security measures. | Enhance cybersecurity measures, including regular penetration testing, and implement tools that facilitate more frequent compliance audits. |
| Establish connectivity with Satusehat, a central government platform for digital medical records. | Cultivate a culture of proactive monitoring and adaptation, where teams are encouraged to stay informed about updates and changes in external platforms like Satusehat. | Form a dedicated team for monitoring and optimizing integration with external platforms like Satusehat, ensuring seamless data exchange. |

| Activity | Cultural Changes | System Changes |
|---|---|---|
| Encompass both physical and digital medical record storage, with a particular emphasis on transitioning to digital records. | Instill a culture of digital transformation by recognizing and celebrating departments that actively contribute to the transition. | Intensify digital transformation efforts through targeted training programs for medical staff and consider implementing digital incentives. |
| Constrained by government regulations, industry standards, technological advancements, and the imperative for interoperability within the healthcare sector. | Develops a culture of continuous learning and adaptability, where staff are encouraged to stay informed about changes in regulations, industry standards, and technological advancements. | • Invests in ongoing training programs to keep staff abreast of technological advancements and interoperability requirements.<br>• Establish a task force to regularly review and adapt to government regulations and industry standards changes. |

## CONCLUSION

The definition of the current and target digital ecosystems in Rumah Sakit MKK are as follows. The current digital ecosystem combines physical and digital medical records, with the hospital still storing many physical medical records. Additionally, the existing hospital information system faced several challenges, including ineffective utilization by several staff members due to a lack of skill sets and the system still needing to be adjusted to the central government database, Satusehat. The target digital ecosystem planned to fully implement an electronic document management system (EDMS) to enhance the efficiency of storing and retrieving medical records, establish a structured feedback mechanism and communication platform to facilitate regular interaction among key actors, enhance cybersecurity measures, including regular penetration testing, and implement tools that facilitate more frequent compliance audits, form a dedicated team for monitoring and optimizing integration with external platforms like Satusehat, ensuring seamless data exchange, and, intensify digital transformation efforts through targeted training programs for medical staff and consider implementing digital incentives. The benefits of fully digitizing medical records in Rumah Sakit MKK as streamlined processes, reduced expenses, improved operational efficiency, and stablished connectivity with Satusehat, a central government platform for digital medical records, thus complying with government regulations. The challenges faced by Rumah Sakit MKK in digitizing medical records are procurement challenge related to additional servers and PCs needed to support the digitization process, staff skillsets challenge related to the inadequate IT skills, particularly among older medical staff, and communication challenge to ensure that every stakeholders are aware of the transformation.

The strategies defined to ensure a smooth digital transformation at Rumah Sakit MKK are facilitate the storage, management, and controlled access to medical records, involve key stakeholders such as the Hospital Director, Management Board, IT Team, Medical Staff, Administrators, Central Hospital Group, IT Vendors, and Patients, operate while following government regulations, guaranteeing data security, maintaining confidentiality, and adhering to healthcare standards, establish connectivity with Satusehat, a central government platform for digital medical records, encompass both physical and digital medical record storage, with a particular emphasis on transitioning to digital records, and constrained by government regulations, industry standards, technological advancements, and the imperative for interoperability within the healthcare sector.

## REFERENCES

Afrizal, S. H., Handayani, P. W., Hidayanto, A. N., Eryando, T., Budiharsana, M., & Martha, E. (2019). Barriers and challenges to Primary Health Care Information System (PHCIS) adoption from health management perspective: A qualitative study. *Informatics in Medicine Unlocked*, *17*, 100198.

Ahmadi, H., Rad, M. S., Nazari, M., Nilashi, M., & Ibrahim, O. (2014). Evaluating the Factors Affecting the Implementation of Hospital Information System (HIS) Using AHP Method. *Life Science Journal*.

Bhattacharya, C. B., Korschun, D., & Sen, S. (2009). Strengthening stakeholder--company relationships through mutually beneficial corporate social responsibility initiatives. *Journal of Business Ethics*, *85*, 257–272.

Bustard, D., He, Z., & Wilkie, F. (1999). Soft Systems and Use-case Modelling: Mutually Supportive or Mutually Exclusive? *32nd Hawaii International Conference on System Sciences.* Coleraine: School of Information and Software Engineering, University of Ulster.

Hapiffah, S., & Sinaga, A. (2020). Analysis of Blokchain Technology Recommendations to be Applied to Medical Record Data Storage Applications in Indonesia. *International Journal of Information Engineering & Electronic Business*, *12*(6).

Panesar, A. (2019). *Machine learning and AI for healthcare*. Springer.

Sadoughi, F., Kimiafar, K., Ahmadi, M., & Shakeri, M. T. (2013). Determining of Factors Influencing the Success and Failure of Hospital In formation System and Their Evaluation Methods: A Systematic Review. *Iran Red Cres Med J.*

Sandfreni, F. A. (2020). The Implementation of Soft System Methodology (SSM) for Systems Development in Organizations (Study Case: The Development of Tourism Information System in Palembang City). *First International Conference of Science, Engineering and Technology, ICSET 2019.* Jakarta.

Serobatse, M. D. (2013). *The challenge of implementing health information systems: a case study in Charlotte Maxeke Johannesburg Academic Hospital*. Stellenbosch: Stellenbosch University.

Solberg, E., Traavik, L. E. M., & Wong, S. I. (2020). Digital mindsets: Recognizing and leveraging individual beliefs for digital transformation. *California Management Review*, *62*(4), 105–124.

Vegoda, P. R. (1987). Introduction to Hospital Information Systems. *International Journal of Clinical Monitoring and Computing 4: 105-109*.

Vila, R. A., Estevez, E., & Fillottrani, P. R. (2018). The design and use of dashboards

for driving decision-making in the public sector. *Proceedings of the 11th International Conference on Theory and Practice of Electronic Governance*, 382–388.