Global Management: International Journal of Management Science and Entrepreneurship

E-ISSN: 3063-6256
P-ISSN: 3048-4170

Research Article

Development Strategy System Information Management in Support Organizational Digital Transformation

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Abstract: Goals – Goals from studies This is For explore approach strategic in development System Information Management (SIM) as integral part in support digital transformation of modern organizations. Study This emphasize importance integration technology information, effective data management as well as improvement digital competence resources Power man in operation system. Design/ methodology / approach – Conceptual article This use method review library with analyze various work relevant academic and technical manuals, in particular related implementation of SIM in the sector public and private. Study This referring to the works Jatnika et al. (2022–2024), including utilization Microsoft Office applications as skills supporting basis organizational digital literacy. Findings – Findings studies This show that SIM development is not just effort technical, but rather need strategic in support digital transformation. Key strategies covers design modular systems, data mining integration, training programs based users, and evaluation system in a way periodic. Components This allows organization build responsive and adaptive SIM ecosystem. Implications practical – Organizations that want to do digital transformation is necessary invest in development digital capabilities of sources Power the human as well as ensure effectiveness use developed SIM system in a way strategic can become driving force main in increase efficiency, accuracy, and capability taking decision across work units. Originality / value – Study This offers a conceptual model structured about development of SIM in context digital transformation , based on literature applications and needs organizations in the real world . This article give outlook practical for taker policy, IT managers, and HR developers.

Keywords: Data Mining; Digital Competence; Digital Transformation; Microsoft Office; Organizational Strategy

Received : September 30, 2025

Revised : October 27, 2025

Accepted : November 22, 2025

Published : November 25, 2025

Current Ver.: November 25, 2025

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1. Introduction

The digital era has change landscape operational organization in a way significant . Digitalization No Again only become superiority competitive , but rather must strategic . In context this , System Information Management (SIM) plays role important as bone back in taking data -driven decisions . Good SIM No only collect and store information , but also able to process and present data in real-time for support planning , organizing , implementing , and supervising . According to Jatnika , Rifai, and Purwanto (2022) , integrated SIM with data mining possible organization For dig outlook strategic from the available big data .

Direction digital transformation in Indonesia has confirmed in Regulation President Republic of Indonesia Number 95 of 2018 about System Government Based Electronics (SPBE), which requires agency government implement system information integrated use creating governance effective , efficient , and transparent governance . In addition that , Regulation President Number 39 of 2019 about One Data Indonesia also emphasizes importance inter-agency data interoperability which becomes base taking more decisions

accurate and measurable . Support regulations This show commitment government in build integrated digital ecosystem in the sector public , which in turn also influences organization sector private For apply standard system similar information .

According to Seppänen , Saunila , and Ukko (2024) , who conclude that system information integrated management own correlation positive with flexibility organization in face disruption technology . This is show that SIM is not only just tool help administrative , but also an instrument strategic in management organization in a way dynamic .

Draft SIM development in line with theory system open (open system theory), where the organization viewed as interacting entities in a way dynamic with environment . In context this , system information act as input-process-output mechanisms that enable organization For absorb information external , process it internally , and produce decision strategic . Besides that , approach knowledge management based also strengthens the role of SIM as tool For capture , store , and disseminate knowledge throughout line organization in a way systematic and sustainable . Machado and Davim (2024) explain that success digitalization in organizations rely heavily on integration between system information and management strategies knowledge , as well as ability organization in build culture share information .

According to Wamba et al. (2022) underline importance adoption technology aligned information with objective strategic organization . They emphasize that transformation digital no can separated from the organizational reengineering process in a way comprehensive , including change structure , policies , work processes , up to behavior individual . Therefore that , success SIM implementation is not only determined by sophistication technology , but also by readiness culture organization and capacity source Power man in adopt change .

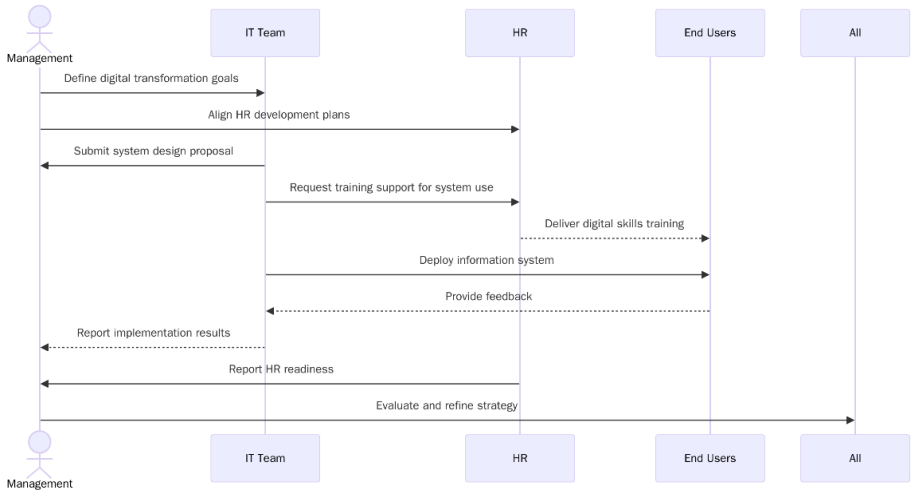

Figure 1: Development of SIM in Support Organizational Digital Transformation.

The diagram illustrates channel interaction between stakeholders interest main management , IT team , HR , and users end in development strategy System Information Management (SIM). The process begins when management identify need business and establish objective digital transformation , then responded by the IT team with prepare a digital roadmap and design architecture system . At the same time , HR is directed For adapt training strategies use support readiness power Work face change technology . HR provides training to users , temporary IT team implements modules the system that has been developed . After system run , user give bait come back related experience usage , which then reported by the IT team to management simultaneously with achievements performance system (KPI). HR also participates report readiness and capability power work , so that management can evaluate and provide agreement For continue to stage optimization next . This process reflect approach collaborative and sustainable in realize effective digital transformation .

2. Literature Review

Study This use Systematic Literature Review (SLR) approach as method main in study role strategic and direction development System Information Management (SIM) in support digital transformation of organizations . Approach This chosen Because own superiority in compile synthesis knowledge from various studies that have been published in a way systematic , structured , and transparent . Systematization in SLR allows researchers For get

description comprehensive about trend research , practice best , and gap research gap that has not been Lots reviewed in literature previously . Like explained by Novianto (2023) , SLR becomes effective approach For dig relatedness intervariable through analysis thematic to literature that has been selected in a way strict .

Initial step in the SLR process is formulate question research that will be answered through study literature . In context this , question main proposed covers How role strategic SIM in support digital transformation of organizations , what strategies are proven effective in development and implementation of SIM in various sector , as well as challenge main what is being faced in its implementation . For answer question said , is done search library in a way systematic through various reputable databases national and international , such as Google Scholar, Scopus, ScienceDirect, IEEE Xplore, SpringerLink, Wiley Online Library, and Taylor & Francis. Keywords search used covers terms such as "Management Information Systems", "Digital Transformation", "Organizational Strategy", "Enterprise Information Systems", "Business Intelligence", "Artificial Intelligence in MIS", and "Strategic IT Management". Entire search focused on published articles in range time between 2022 to 2025 for ensure recency and relevance content to development technology and organization moment This .

Selection process literature done in a way gradual . Stage First covers filtering beginning based on title and abstract For evaluate relevance general . Then done reading full to articles that passed selection beginning For evaluate contribution scientifically in a way more deep . Only articles that fulfill criteria inclusion — that is, peer - reviewed, has access full , and relevant in a way substantial with SIM topics and digital transformation are maintained For analyzed more continue . Meanwhile that , the article that is not fulfil criteria those , including those that are not available in form complete or No through the review process colleagues , expelled from the study list . Of the total literature collected , there were 33 articles selected considered the most relevant and representative For analyzed in a way thematic and critical .

Analysis to article selected done with grouping themes big based on recurring issues in literature . Some theme main thing that appears among other roles strategic SIM in taking decision data- driven , integration digital technologies such as big data, cloud computing, and artificial intelligence in SIM, development source Power man based digital literacy , as well as evaluation and adaptation system to dynamics external . References important in discussion This covers work Jatnika , Rifai, and Purwanto (2022) who emphasized importance data mining integration in MIS for increase quality taking decision ; Crişan and Marincean (2023) discuss change structure managerial in the digital era; Seppänen , Saunila , and Ukko (2023) who evaluated transformation control organization based system information ; and Wahyudin et al. (2024) which shows How digital transformation drives effectiveness organization through SIM strengthening .

Besides that , contribution Jatnika and colleagues others (2023; 2024; 2025) also become references main , especially in development device digital training such as Microsoft Excel, PowerPoint, and Microsoft Office Specialist (MOS) modules that play a role big in improvement human resource capabilities . Support for strengthening this internal digital competency the more show that success SIM implementation is not only determined by technology , but also by readiness humans and systems organizations that support it . Research by Nento and Drajana (2025) as well as by Viery et al. (2024) participate strengthen findings This with highlight the importance of periodic audits and practices evaluation sustainable in guard SIM effectiveness in the middle change dynamic technology .

For guard validity and accountability results , the whole process in this SLR done based on principle transparency and replication . Researchers in a way explicit state criteria selection and analysis used , as well as list all over analyzed references . With approach this , the result study No only serve description holistic about role and strategy of SIM in digital transformation , but also provides recommendation based evidence that can be implemented in context organization public and private .

Question Study

a. How system information management (MIS) is conceptualized in context digital transformation of organizations , in particular in matter structure , function , and integration with technology new ?
b. What connection between SIM development strategy , readiness source Power humans , and adoption digital technology in increase effectiveness organization ?
c. Framework work , approach conceptual , or what model has been proposed in literature For support effective SIM development and what just gap what is needed ?.

Search Strategy

Database used including Scopus, Web of Science, ScienceDirect, SpringerLink, SAGE, Wiley, JSTOR, DOAJ, and Google Scholar . inclusion : published articles between 2020 and 2025, written in Language English or Indonesia, has through a peer-review process, and focuses on context sector public or defense .

Criteria Inclusion / Exclusion

a. Includes : Studies empirical , theoretical model , research organization related System Information Management (SIM), SIM strategy, implementation system information and digital transformation .

b. What is excluded : Linking the result with managerial strategies or direction digital transformation of organizations .

3. Method

Digital Transformation

System Information Management (SIM) in context digital transformation conceptualized as infrastructure strategic that is not only support function administrative , but also become foundation main in taking data- and knowledge - based decisions . In structure organizationally , SIM was developed in a modular and integrated manner so that it can accommodate flexibility and scalability system to change need business and development technology (Jatnika , Rifai, & Purwanto , 2022). The modern MIS structure allows merger cross function like finance , resources Power human , logistics and services customer in one integrated platform that drives efficiency operational and integration information .

SIM not Again limited to data collection and storage , but has evolve become tool analytic sophisticated that can support business processes in real-time, speed up channel work , and improve the accuracy of organizational strategy (Crişan & Marincean , 2023 ; Wahyudin et al., 2024). The system This support various function critical , start from planning strategic , control managerial , up to evaluation performance data -based that continues to grow updated.

Integration with technology new be one of characteristics main in conceptualization of SIM in the digital era. Technology such as big data, cloud computing, intelligence artificial intelligence (AI), and natural language processing (NLP) now has integrated in SIM design for increase ability predictive and adaptive to dynamics external (Arslan, Riaz, & Cruz, 2023 ; Martins & Machado, 2023). Seppänen , Saunila , and Ukko (2023) stated that system integrated information with tool analytic AI -based enables realization of the decision-making process decisions that are not only responsive but also proactive .

Integration of Modern Technology

A modern SIM card must be adopt technology latest such as cloud computing, big data, and intelligence artificial intelligence (AI). This integration allows data processing more fast and accurate , and produce predictions and recommendations based analytics . Jatnika et al. (2022) emphasize that SIM card integration with data mining methods are capable of increase quality taking decision in a way significant . Support other literature also shows that digitalization allows achievement efficiency and agility more operational high (Crişan & Marincean , 2023 ; Seppänen , Saunila , & Ukko , 2023).

SIM integration with digital technology is also changing paradigm measurement performance organization become more dynamic and adaptive , as confirmed by Cosa and Torelli (2024) , through system measurement flexible and real-time digital- based . This is also supported by studies Viery et al. (2024) shows that SIM can bridging the strategic gap through business process optimization and improvement quality service data- based .

Development strategy System Information Management (SIM)

Development strategy System Information Management (SIM) is something a very crucial approach in support effectiveness and efficiency operational as well as taking decisions in various type organization , good sector public and private sector . According to Hendra Jatnika , M. Farid Rifai, and Yudhy S. Purwanto in book System Information Management : Data Mining (2022) , SIM development strategy is not only related with aspect technology only , but also includes compilation integrated , adaptive , and capable system produce relevant information in real-time for support need taking data -based decisions . The use of data mining

as explained by Jatnika et al. (2022) become an integral part of the SIM development strategy because capable identify patterns , trends and predictions that can used as base For formulate organizational policies and strategies .

4. The Relationship Between SIM Development Strategy and Readiness Human Resources and Adoption Digital Technology in Increase Effectiveness Organization

Digital transformation requires readiness source Power tall human . Training sustainable to use application supporters such as Microsoft Excel and PowerPoint become crucial . Training module developed by Jatnika et al. (2023) show that mastery device soft This capable increase productivity Work as well as strengthen internal organizational communication and collaboration . In context management change , digital skills are becoming one of the indicator main success transformation (Putra, Jatnika , & Kusmiati , 2023).

The right SIM development strategy will direct organization For build a system that does not only fulfil need information moment this , but also enough flexible For adapt self with change fast and complex technology . SIM developed in a way strategic will capable support taking decision data- driven , integration cross core business process functions and automation (Jatnika , Rifai, & Purwanto , 2022 ; Crişan & Marincean , 2023).

However , the effectiveness of SIM is greatly influenced by the readiness of human resources in adopt and manage system said . Readiness This No only covers skills technical in operate device soft such as Microsoft Excel and PowerPoint (Jatnika et al., 2023), but also includes ability strategic in interpret information , create decision based on data, and adapt with new digital system (Putra, Jatnika , & Kusmiati , 2023). Therefore that , digital literacy and training sustainable become key main in support success implementation of SIM (Wahyudin et al., 2024).

Collaboration between the SIM development strategy and HR readiness also contributes to creation culture adaptive organization to change . This is reinforced by Nento and Drajana (2025) who found that organization with level high human resource readiness more capable optimize benefit from SIM adoption in context digital transformation . In addition that , Cosa and Torelli (2024) confirm that success adoption technology is very much determined by ability organization in integrate system information with system measurement responsive and flexible performance .

5. Conceptual Model and Framework work , what has been proposed in literature For support effective SIM development and what just gap what is needed

Development System Information Management (SIM) in context organizational digital transformation demand approach conceptual that is not only emphasize aspect technology , but also pay attention to synergy between structure organization , business processes , and competencies source Power Humans . The conceptual model proposed by Jatnika , Rifai, and Purwanto (2022) leave from integration between SIM and data mining as effort For increase effectiveness taking decision based on big data . In this model , SIM is positioned as foundation for processing information strategic through integration vertical and horizontal between units organization .

Besides that , Crişan and Marincean (2023) introduce framework Work digital transformation in companies service management that underlines the need reorientation structure control organization through system adaptive information . Seppänen , Saunila , and Ukko (2023) also highlight importance SIM integration with system control modern management for increase efficiency and transparency . In context business services , approach based flexibility such as the Flexible Performance Measurement Systems (FPMS) proposed by Cosa and Torelli (2024) show that system information must capable respond market dynamics with fast through indicator relevant and real-time performance .

Framework other sufficient work stand out in literature originate from studies Wahyudin et al. (2024), who positioned SIM as the main platform in support digital innovation and improving capability organization . In framework this , adoption technology such as cloud computing, AI, and IoT are positioned as catalyst in transformation management information and business strategy . Vella, Misra, and Singh (2023) also contributed perspective about importance integration between architecture technology information and development system enterprise -based for creating a scalable and powerful SIM competition tall .

However Thus , a number of gap Still seen clear in literature as following :

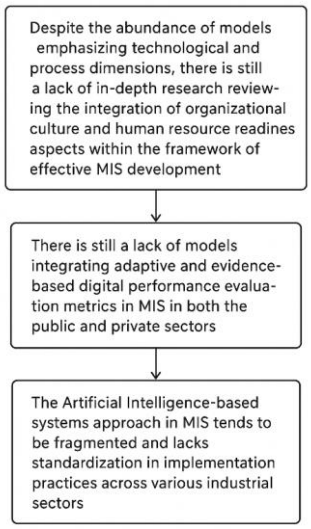

Figure 2: Development Strategy Gap System Information Management in Support Organizational Digital Transformation

Other gaps that need to be bridged is the need for a conceptual model that is capable of accommodate need organization scale small and medium enterprises (SMEs), which often have limitations in infrastructure and capacity technical . Literature like from Nento and Drajana (2025) as well as Maheswari (2023) emphasize the importance of a modular and adaptive SIM development strategy to source limited power .

6. Implications Policies and Recommendations Strategic

Digital transformation through strengthening System Information Management (SIM) is not only is challenge technological , but also demanding intervention holistic policy . From the results study systematic this , can concluded that success implementation of SIM that supports digital transformation is highly dependent on policy institutional that encourages synergy between aspect technology , resources Power humans and culture organization . Therefore that , government and organizations need formulate policies that do not only adoption - oriented the latest digital technology , but also strengthening supportive internal ecosystem data management , retrieval decision based evidence , and resilience system information in a way comprehensive . Recommendations that can be proposed includes : first , development framework regulations that encourage SIM integration with technology intelligent such as Artificial Intelligence (AI), Internet of Things (IoT), and big data analytics adaptive ; second , improvement capacity source Power man through digital literacy programs , certification competence technology information , as well as training based practice best in the sector public and private ; third , strengthening data governance and interoperability system inter- organizational unit through architecture system standardized and agile information ; and fourth , the establishment of a monitoring and evaluation unit for SIM periodically that can ensure sustainability as well as effectiveness system in support performance organization in the middle dynamics rapid digital transformation .

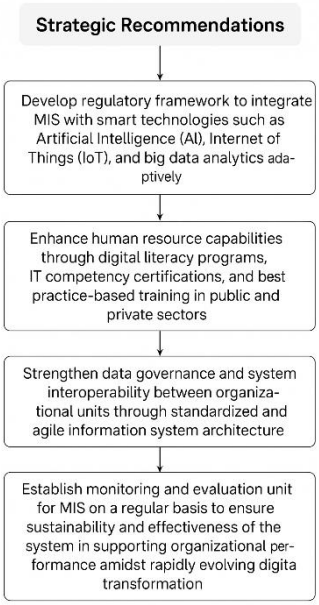

Figure 3: Recommended Strategy.

7. Conclusion

ongoing digital transformation rapidly demand organization For adopt approach strategic in development System Information Management (SIM) that is not only based technology , but also integrated with aspect source Power human , structure organization and culture work . Study results conceptual This show that the SIM is designed modularly , supported technology latest such as big data, AI, and cloud computing, as well as aligned with improvement digital competence of human resources, capable push effectiveness operational , accuracy taking decisions and flexibility adaptive organization .

Through Systematic Literature Review (SLR) approach , articles This confirm importance strengthening synergy between SIM development , HR readiness , and integration technology as foundation main digital transformation . Challenges main like limitations standards , lack of integration culture organization , as well as Not yet optimally metric evaluation performance system , shows existence need urge will be a more conceptual model adaptive and based evidence . Therefore that , policy strategies that support regulations smart , improvement digital literacy , interoperability system and evaluation sustainable become key SIM success in increase Power competition organization good in the sector public and private.

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