

MANAGEMENT INFORMATION SYSTEMS: A VERITABLE TOOL FOR ORGANIZATIONAL SUCCESS

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ABSTRACT

It is important here to mention the concept of such research which is mainly based on the development, composition, results, barriers, recommendations, and the newest tendencies related to the evolution of MIS. The paper draws from three main sources: six historically approved theories, key contributors to the history of education, and successful case studies of implementation. The study systematically examines business optimization at different levels, including key statistics and decision-making processes. This section discusses the latest technology trends, focusing on system compatibility, integration, and data security from a technological perspective. By leveraging MIS core values and technological advancements, companies can use MIS as a powerful tool to drive sustainable growth, foster innovation, and achieve significant strategic success even in challenging business environments.

Key Words: Management Information System (MIS), Data-Driven Business, Data Utilisation, Business Analytics, and Cybersecurity.

Introduction

The efficiency and accuracy of processes are crucial for an enterprise, and similarly, MIS plays a vital role in implementing technologies like data collection, processing, and analysis for strategic decision-making and operational improvement. Without MIS in place, the absence of effective communication and utilization of gathered information can lead to challenges (OBrien, 1999). The organisation will most likely lack competitiveness in the current dynamic environment and data-driven business era. Through MIS utilization, organizations can enhance their effectiveness by improving efficiency and innovation, leading to long-term positive outcomes (Rêgo et al., 2021). Moreover, MIS is a tool that can enable companies to spot market trends, check what competitors do, and forecast what might be in demand in the future (Tsiakis, 2015). This creates an opportunity for businesses to avoid unemployment risks and gain a competitive advantage, positioning them favorably in the competition (Bilan & Apostoiaie, 2023).

The development of MIS systems is becoming increasingly sophisticated and complex due to modern technological advancements. These advancements help organisations get the desired information and make decisions fast and accurately with the aid of real-time data. To sum up, an organisation can only grow, transform, and survive in a dynamic business environment through the creation of MIS and its integration (Marnewick, 2016).

Historical Development of Management Information System

The Evolution of Management Information Systems starts with the first introduction of machines in the workplace and moves on to the newest developments that are taking place in management information systems and the latest inventions in management information systems and their impacts on modern businesses (Bocij, Greasley & Hickie, 2008). Moreover, the history of MIS began in the days of computing, when firms began to use computers for the processing of data and storing information. Technological evolution brought about the development of MIS software, adapting to enhance features and improve the capabilities of the systems to suit changing organisational requirements (Gorry & Morton, 1989; Oz, 1999). Currently, MIS helps enterprises utilise data and identify processes that are becoming impediments to progress, increasing efficiency in the long run. The value of comprehending the evolution of MIS lies in knowing how MIS can be put into a better plan and lead to the success of business in this current cutthroat business environment (Kroenke et al., 2013). One major thing that stands out in business success is the fact that businesses need to strive to be adaptable and innovative to keep up with the changing pace of technology so as to take advantage of MIS capabilities, which serve as a basis for making decisions to spur growth (Berkhout et al., 2011). By performing these kinds of functions as data collection, organisation, and analysis, MIS offers businesses the opportunity to see the tendencies that are there, chances that are going to appear, and challenges that are ready to be solved in an immediate manner. Primarily, on the realisation that MIS has evolved, an organisation would be able to remain relevant, be competitive, and save itself from the disaster of becoming obsolete in the digital era if it accepted the transformation of MIS (Laudon & Laudon, 2017; O'brien & Marakas, 2006).

Evolution of Management Information System

Over time, businesses have adapted management information systems (MIS) to keep pace with the rapidly changing technological environment. Witnessing the emergence of MIS from simple data processing systems to advanced tools of analytics, this has radically altered facts about businesses and decision-making in organizations (Raymond & Bergeron, 2008). As big data and artificial intelligence take centre stage, MIS also advances and goes on leading the approach of how companies take technology advantage as a way to move ahead of their competitors. With the ongoing trend of data-oriented insights for key business decision-making, the contribution of MIS will gain importance to both managerial status and innovations driving success (Kraus et al., 2021). With a growing question in the modern digital world, the need for professionals with Management Information Systems (MIS) talents will inevitably increase. Firms trying to make their way to the top of the industry will definitely place a high priority on those candidates who are skilled in the use of the very latest technologies and trends in MIS (Bourgeois et al., 2019). With the right support and guidance, organisations, emphasising data-driven decision-making, can use MIS for their daily activities to automate processes and consequently lead to efficiency and profitability in the dynamic and competitive business sphere (Bosker et al., 2007).

MIS has advanced significantly since the 1950s thanks to the advent of computers, relational databases, and cloud computing. There will be more AI-powered and automated data analysis modules in MIS in the future, which will increase employment opportunities (Somogyi & Galliers, 1987). For operational efficiency, businesses need qualified personnel to integrate technology, and embracing the newest advancements may provide them a competitive advantage. There will be an increase in the need for MIS specialists, making education and training programmes essential for sustained success (Silvius et al., 2009; Rodriguez & Walters, 2017; Dyrbye et al., 2020).

Key Contributors of Management Information System

Key contributors and their inputs will be significant determinants of the next century's most beneficial technologies for business. Key facts from the work of Elon Musk, Jeff Bezos, and Mark Zuckerberg have already greatly contributed to the development of the field (Park & Wallace, 2020). Therefore, I have no doubts that their contributions will play a critical role in future business technology growth. Indeed,

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succeeding in their innovations in various fields, like space missions, e-commerce, and social media, has displayed the future of MIS, where it will occupy the place of leading developments in today's technologies. The use of data-driven decision-making will increase demand for skilled workers who have encountered MIS. The call for a technology-fueled workforce necessitates adequate investment in trained personnel, along with the acceptance of new technological developments to remain relevant in the digital age (Awan et al., 2021; Diván, 2017). Upon their implementation, it is maintaining to be on the edge of technological changes that is equated with getting an edge ahead of their competitors and, hence, staying ahead of the competition. This will mandate that efforts be made for regular and consistent training and development of workers, as well as having a receptive and accepting culture that accepts new technologies and methodologies. In the end, the businesses with the ability to efficiently use MIS in order to further their development and achieve higher efficiency will be the top players on the increasingly dynamic business stage (Jackson & Carruthers, 2019).

Components of Management Information System

The components of MIS are the hardware, software, data resources, the regulatory and technical instructions and regulations, and the people. Each component provides essential needs to collect, process, store, and distribute information within the organization. Hardware is the main physical part of a computer, which provides a set of interface, data transmission, operation, input, and storage devices (Nascimento et al., 2018). The software, on the other hand, includes the programmes and applications that aid in managing and analysing information. Data sources are the raw material of a system that is processed into information, and rules are in place for continuous processing and security (Bourgeois et al., 2019). Along with that, the members of the organisation who utilise MIS must do so in a manner that is effective in assisting them to arrive at informed decisions, thus ensuring organisational productivity and success. These are the main components of the overall system of information that support the knowledge process and sustain information flow within the organization (Ahmad & Al-Shbiel, 2019). Data handling and storage are enabled through the installation and operation of a combination of good hardware and software. The data assets that are gathered would then define scope for analysis, decisions, and insights (Raptis et al., 2019). Procedures and protocols help the majority of information be exactly and clean, while people are one of the most important actors in MIS, using them to push the

organisation towards strategic initiatives and business success (Zhang et al., 2015). In the final analysis, a MIS with a good working platform is critically important for companies to stand out in the market and make adjustments in times of need to react quickly to a constantly changing business environment (Street & Meister, 2004).

Data Collection and Processing

Data collection and processing are clearly MIS's duties. With the recognition of different sources without which the collection of data is not possible, the MIS processes and computes information and transforms it into meaningful data used for decision-making (Mithas, Ramasubbu & Sambamurthy, 2011). This type of data could draw attention, follow the rhythm, and provide strategic decision-makers with information. Furthermore, MIS allows for the precise organization and storage of data, making it easier to access and locate. In addition, the part of MIS is to check the information precision and stability by means of verification and occurrence identification that leads to data precision and reliability (Garg & Pahuja, 2020). This, in turn, helps ensure that proper data is applied to the process of decision-making. For instance, a retail company can utilise MIS to monitor sales trends of items in various categories and stores so that ineffective stocks can be removed at a moment and the remaining items in high demand can be given priority, thus optimising the operation (Carillo et al., 2019; Awan et al., 2021). This MIS can be used to validate sales information, and all data provided through the sales process is accurate and reliable. This data in turn enables the company to have reliable information on their pricing, promotions, and product selection (Benbya et al., 2019).

Storage and Retrieval of Data

MIS is accountable for storing and pulling this data, which is vital for sales modelling and trend analysis. It further allows companies to effectively execute and plan future projects as well as analyse past projects (Asemi, 2011). In other words, MIS can be the glue that makes departments not so distant from each other function according to the same script by having a unified forum for information distribution and the exposure of new insights (Tripathi, 2011). Via MIS, organisations can use their operations and gain more over their competitors as the markets get quickly outdated. Nowadays, managers have easy access to real-time data as well as tools via which they can promptly search for weakness points in the

organisation's functioning and use opportunity to identify areas that need improvement to achieve the desired outcome (Laudon & Laudon, 2017). In the modern digital era, it is very important to have an MIS system that is apt for the purpose of survival and able to meet the demands of clients. To illustrate, let's say a retailing company sets up a MIS system and gathers sales data in real-time for the purpose of knowing which products are in-demand and what trends are here and now, so that it can adjust its stock levels in accordance with these important data and increase its profits (Hasan et al., 2013). Furthermore, by conducting an in-depth investigation of the customer data stemming from the MIS system, the company can customise marketing campaigns dedicated to particular segments of the audience, which results in enhanced customer relationships and loyalty (Guerola-Navarro et al., 2021).

Information Dissemination through Management Information System

Information distribution via the MIS system is another crucial element of this change. Employees can develop better judgement, and consequently, department efficiency increases, which is a great step for any company. Thus, having a smart and integrated MIS system that has been really designed to give an organisation an uncanny appearance that is friendly to the environment with a clear vision of its goals gives the company a clear edge in the market and helps it to adapt to changing situations in the business sector easily (Karimi et al., 2001; Choi et al., 2010). Moreover, this information held by the MIS can be used to spot the traction of customers as well as their demand for the products; thus, the business will know and engage the customers at the appropriate time, and the customer, in turn, will get satisfaction (Thakur, 2019). Hence, the company's pro-concept strategy can help make it more competitive and improve its revenue base. Through the adoption of cutting-edge technology and employing data analytics, companies can be one step ahead of their competitors and join the market leaders (Sprongl, 2013). And finally, a presentation of the pros of the of the MIS system makes the case more visible, as it allows for a shift in the way goods are handled and business conducted within the current business environment (Marnewick, 2016). To highlight this example, a retail firm may employ their MIS system to trace sales figures and customers' choices of items. By doing so, the company can stock preferred and worthwhile products and simultaneously adjust their pricing accordingly. It quickens the process of customer satisfaction and loyalty, as a consequence of which the company is likely to experience a hike in sales and profits (Alawamleh et al., 2021).

Decision Support Systems Integrated into the Management Information System

Integrated decision support systems in the MIS also provide those priceless insights that can come in handy when it comes to strategic decision-making and making well-informed business choices that will lead to more growth and ultimate success. Therefore, a strong MIS system search provision can provide an edge in a company's businesses and guarantee the organisation's success in a continuously changing business environment (Divan, 2017; Brynjolfsson & McElheran, 2016). Utilising data and technologies timely and accurately, companies can reduce the complexity of their operations, make their business operations run smoothly and efficiently, and at the end, meet their objectives in an easy way (Rejikumar et al., 2020). As technology grows and revitalises itself with new trends, it becomes crucial for enterprises to cope with the development by employing advanced management information systems and techniques. Such systems can not only lead to efficient implementation of daily routines, but they can also be a means to find new avenues for growth and new ideas (Jonasson, 2000). By incorporating information and technology, businesses can navigate changing market conditions and position themselves as industry leaders. In light of the contemporary competitive business situation that exists, the mention and fact of a fully integrated MIS system are essential for businesses to do sustainably and also profitably (McKnight, 2013).

Performance Monitoring and Evaluation

Performance management and monitoring and evaluation were included in the list of key features that MIS systems provided businesses with so as to enable them to track their progress and make strategic decisions. This was achieved with real-time data (Phiri, 2015). Through describing the most critical factors and using comparative values over time, products can track and modify weaknesses and, consequently, adjust operations to improve performance. In addition, the information systems in businesses make it possible for the business processes to be simplified, the costs to be reduced, and the overall efficiency of the business to be enhanced, ultimately leading to increased competitiveness on the market and the long-term success of the business (Parmenter, 2015). However, the creation of a stable, scalable MIS system will determine not only the long-term success of an organisation but also its growth and steadiness of development in different conditions (Mikalsen et al., 2021). In this day and age when

technology advancements and data evolve faster and faster, companies must do their best to stay ahead of the competition by using MIS systems and being up-to-date with the latest trends. These systems give a complete picture of how well the enterprise performs. With this information, the management can make more informed decisions and strategic plans (Demian & Walters, 2014; Teittinen et al., 2013). By moving with the times and entering the data analytics arena, as well as embracing automation, businesses can remain flexible, cope with market changes straightforwardly, and stay one step ahead of their industry competitors. The current business atmosphere is fast-paced, so investing in an MIS is not merely an advantage; it is inevitable, and this is the key to growth and sustainability (Soltanifar, Hughes & Göcke, 2021). For instance, a retail outlet would be in a position to access sales data as they occur and be able to tell whether there are any trends that could help in recognising customer preferences so as to adjust the inventory in accordance with demand arising as a result of those trends. Such a strategy will help the company develop its supply chain performance and avoid extra costs, leading to an increase in the overall company's profitability (Gunawan & Sulaeman, 2020).

Management Information System in Organizational Success

MIS plays a vital role in the achievement of an organisation's success by providing guidance in the realms of strategic decision-making, operational effectiveness, competitive advantage, innovation, adaptability, and measurement and improvement of organisational performance. With respect to business aspects, MIS enables enterprises through the timely and accurateness of information used for decision-making (Majchrzak & Markus, 2012; Wu & Lederer, 2009). On this account, companies are in a strategic position to cope with the ever-rising competition, to locate the improvement areas, and to perform well on the market, as they do. Through measuring and enhancing the performance of MIS, businesses are enabled to reach their objectives as well as achieve desired results in the cutthroat world of modern business (Madonsela, 2020). MIS stands out as being the central element in dealing with industrial processes, especially in light of systematisation and efficiency, as well as the more effective usage of limited resources and ultimately productivity. Through the automation of ordinary tasks and the instant precipitation of data, organisations will come up with more prompt and efficient decisions (Mapiye et al., 2023). Moreover, MIS pursues discovering trends and indicating patterns in the data, which subsequently reveals to companies what is going on in the market and the forthcoming changes

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and brings them to the nerves to do something with their strategies proactively (Trucolo & Digiampietri, 2017). MIS is an essential tool that not only guarantees business stability in the face of a dynamic business environment but also assists enterprises towards success on a long-term basis. Note that the MIS will give companies an edge over other business operators in the field since it can forecast trends and market variations and respond cogently to the change, thereby enabling organisations to remain relevant (Laudon & Laudon, 2017). This provides businesses with a strategic edge because they can use timely and precise data as the basis of their decision-making, which is far more advantageous than their competitors, who are late in grasping the developments. In summary, MIS has greater advantages than redundancy. Among others, MIS enhances the efficiency and productivity of organisations, and it empowers organisations to make informed decisions that will transform their growth and success in modern business. Such as sales data and inventory signals in real-time can be tracked by a retail company (Staples et al., 2002). This will enable them to adjust their stock levels and product pricing accordingly to eradicate instances of overstocking or understocking. This results in a continuous process where clients' needs are always satisfied on a regular basis and profits are maximized. Furthermore, MIS can also involve the use of customer analysis tools that examine their behaviours and preferences; hence, such information can help in targeting promotions or advertisements by identifying the appropriate demography (Jalali et al., 2019; Schulte & Pibernik, 2017).

Implementation of Management Information System

In place of MIS, the process involves the planning of the MIS system, analysis and design, its development, integration, training and support, evaluation, and feedback. Planning is the first implementable process that requires determining the goals and allocating resources to achieve them. Analysis is understanding the current state of an organisation by gathering data or information to get a better picture of the problem and to find solutions to improve it (Sari & Priantinah, 2019). It appears to concentrate on the design of a system that meets the requirements of the organisation and its users. Development, however, involves building and verifying the system. Integration does not inhibit MIS from working smoothly with existing systems and processes, and training will prepare the users in due course to efficiently operate the system (Castagna & Bigelow, 2021). Support is a must for the resolution of issues and the running of the system smoothly, while the evaluation and feedback fields help in

making it a more advanced system. Informing is the final step in the process, where the MIS is deployed to all users and turns out to be fully operational. This is done through the provision of the data, the training of the staff, and the field performance monitoring activities that will ensure the system is running smoothly (Tilley & Rosenblatt, 2017; Glover et al., 2017). Establishing systematic monitoring and evaluation is therefore critical for detecting any problems or imperfections that may occur in the process of implementation. Through ongoing reviews and changes to MIS, organisations are empowered to ensure the system constitutes the most reliable instrument for making decisions and managing resources. This cyclical process of improvement should therefore be taken very seriously in this age of rapid technological advances and shifting client preferences, which might render systems that were adopted some time ago a thing of the past (Hubert & Mulyungi, 2018). Organisations can lead the competition, and they may be able to make competent decisions and use accurate and up-to-date data in real-time by using this proactive approach and staying alert. In the end, the MIS that is in proper operation can become a worthwhile asset that results in increased efficiency, productivity, and competitiveness in the future (Carillo et al., 2019; Awan et al., 2021).

Challenges and Limitations of Management Information System

Technological, managerial, human, security, privacy, and price issues come with integrating information systems into the organisational structure. The challenge for IT is maintaining compatibility with the new software and hardware developments. From an organisational point of view, the integration of management information systems (MIS) into current working flows and structures is quite complicated (Bayo, 2019). Problems may occur because of team uncertainty about making decisions or a lack of adequate training. Privacy and security encapsulate protecting the privacy of sensitive data from unlawful access or breach. This is to say that data under such a category shall not be subjected to breaches or hacking. Further, the expenses associated with the MIS establishment can include the initial investment in the infrastructure and the recurring costs for upkeep and improvements (Laurent & Giannetos, 2020). Addressing these challenges is a complex mission because it requires a view that considers the interconnectedness of technology, people, processes, and resources. A recommended strategy can be security risk analysis and the roll-out of high-end security solutions, coupled with professional training and support on how to safeguard digital assets (Baskerville, 2019). It could as well

be the case of the MIS infrastructure inspection to guarantee that its condition and efficiency remain satisfactory. By being rational and taking a well-rounded and proactive approach to these challenges, organisations can fully utilise these MIS systems to achieve maximum advantages and stay on the lead in a world dominated by digital reforms (Alawamleh et al., 2021). Integrating and applying innovative methods of the industry and staying abreast of new trends in the space can also ensure that organisations are constantly prepared to deal with dynamic threats and opportunities. Through developing a culture where cybersecurity awareness and accountability thrive, organisations will essentially be handing over the responsibility of being the first lines of defence against various cyber breaches to their own employees. Moreover, the creation and implementation of specific rules dealing with how data is retrieved and who gets physical access to the data store is an effective way to decrease the risks it presents and meet the set industry standards. Finally, it is worth giving requisite attention to the management and maintenance of any good MIS, as it remains critical for organisations to take them on a growth path in today's competitive marketplace (Mayer et al., 2019). Through constant monitoring of recently advanced cybersecurity protection methods and by implementing strong security procedures, organisations can ensure their sensitive data is safeguarded against various threats. Ongoing training and working out roughly the latest cybersecurity techniques can additionally underpin the organisation's safety and reduce the danger of vulnerability (Happa et al., 2019). By practicing a MIS defences-going strategy, organisations are able to protect their assets on time and, in addition, take advantage of digital changes now and in the future. For instance, a bank should regularly conduct pen testing that serves to identify and fasten the security weak points of the desired system before attackers could take advantage of them. These can include both the use of intelligent systems with real-time threat detection and quick reaction mechanisms to mitigate the harm of any given cyber incidents to their core work and clients.

Successful MIS Implementation Case Studies

The MIS of the organising body is linked to their achievement of success in those areas; they experienced higher efficiency, reduced cost, and efficient decisions. One case study might be an international big-brand company that revamped all the activities of their supply chain to make it more efficient by implementing a wide range of management information systems. Such implementation

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helped to accelerate lead times, improve inventory management, and thus finally boost customer satisfaction. Another successful lesson for healthcare organisations is that they used MIS to improve patient care by utilising electronic health records (EHRs) and data analytics tools (Chinotaikul& Vinayavekhin, 2020). This was the factor that led to better treatment outcomes and raised the patient satisfaction rate to higher levels. These case studies illustrate the potency of MIS as a tool for optimising business performance, reaching new levels of efficiency and effectiveness. Furthermore, a retail enterprise utilised MIS in developing marketing strategies by pinpointing the specific clients corresponding to their data analysis. Through the adaptation of the information on the MIS, the company was able to customise promotions, communicate enjoyably with customers, and improve the result, which increased sales and customer loyalty. In these examples, the practicality and capability of MIS in different industries are shown, which demonstrates the fact that the latter has the power to boost the economic growth of a business and create a competitive advantage (Naim, 2021; Haislip & Richardson, 2017).

Organisations that achieve what is possible through MIS put more emphasis on the use of technology as a tool that gives them a competitive advantage in the market. If the MIS system is well-established and effectively used by a company, it can make the whole process smooth, support evidence-based judgement, and enable the participants to achieve their strategic objectives (Wheelen, 2011; Laudon & Laudon, 2017). With technology on the move, the function of MIS as a growth and innovation enabler for organisations in the business setting, with its dynamic nature, will also be of greater importance. In a rapidly changing market, one must be either ahead of or in the back with a difference. Those companies that don't adapt to and invest in modern MIS systems will most likely fall behind their competitors and miss the windows of growth. In the data-driven business environment of today, with constantly increasing speed, the ability to process information 'in the moment'—that is, collect and analyse the data in real time and act on it immediately - is crucial for companies to succeed (Henke & Jacques Bughin, 2016; Gourévitch et al., 2017). Through the adoption of MIS, organisations can implement a strategy to streamline their operations, and this can in turn boost strategic decision-making ability, which leads to overall success in their industry market. However, with the aid of the well-formulated

MIS, it is obviously a compelling factor behind innovation and competitive edge in the modern business world (Alter, 1976; Chang, 2006; Geraedts et al., 2016; Bright & Asare, 2019; Landoll, 2021).

Best practices for maximising benefits. Along with that, organisations should have enough funds to upgrade their technology and get access to data management systems. Moreover, developing a work culture of lifelong learning and professional growth among personnel can also be a key to ensuring a productive MIS implementation that will help push business growth (Haleem et al., 2022). Besides that, it is nothing but imperative to review and make some changes within the MIS strategies and systems to be able to adjust to new market tendencies and be able to hold an advantage in the competitive environment. Through the integration of these rules, MIS can make the most of them in order to focus on innovation and achieve long-term competitiveness. It is attainable for companies to do so by always upgrading with technology, which includes modern and ongoing employee training (Pascucci et al., 2023). Through doing this, they will optimise their use of MIS, which makes informed decisions and is quick in an environment that is dynamic. This forward-looking management strategy for MIS is not only a smart approach to cost reduction but may even help organisational players seize the initiative and address market dangers right away (Laudon & Laudon, 2017). Eventually, building a strong MIS infrastructure and working towards an inspiring culture of innovation can lead a business in advance, survive the competition, and finally position this organisation for long-term success (Tulenheimo, 2015). Another advantage of the corporate MIS system is that it offers a better chance for inter-departmental communication and management and therefore brings about higher efficacy and precision. Also, by doing the analysis of the data and using the know-how tools of MIS, organisations will be capable of having information about consumer behaviour, the occupational market, and final results and will be able to make a policy that increases growth and profitability (Mithas et al., 2011; Garg & Pahuja, 2020).

Future Trends in Management Information System

As the technology is changing so fast, MIS is undergoing a transformation, and this change can then have an impact on organisational and management dynamics. Artificial intelligence and automation are the areas that are changing how businesses conduct their operations, and the outcome will be a speeding up of processes and an increase in production (Cascio & Montealegre, 2016). The introduction of these

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technologies in an organisation is going to change the approach of the management, and they, along with the management team, will have to learn effective ways to make use of the tools in the right manner and stay competitive in the market. It remains, therefore, very important to stay well abreast of the new developments in MIS to make innovative and proactive decisions and accordingly drive the growth of the organization (Volberda et al., 2013). By taking into account the advantages of AI and automation, managers will be able to state positions where processes can be improved by streamlining and performance upon rising. Furthermore, managers who remain well informed about the evolving nature of the technologies are given a chance to reflect on the possible risks and problems involved. Finally, in the end, benefiting from these innovations in technology may mean that there is an agile and sophisticated organisation in the business world, where everything is changing every minute these days. Integration of trending MIS systems into managers' hands can be a vital factor in achieving market dominance and strategic advantage. Implementation of data-base monitoring and automation tools allows managers to provide equal quality to management decisions and efficiency of operations (McKnight, 2013). Engaging in technological improvements as well as building an innovation approach will do a lot, not only to improve the organisation's productivity but also to establish an innovation culture, which will help the organisation grow sustainably in the long run. Besides that, being proactive leads to being ahead of golden trends in the MIS (Keinänen, 2019). Motivated by such foresight, it is possible to prevent getting caught up in market shifts and take advantage of emerging opportunities before competitors. Quickly, a proactive strategy fits and gives the organisation's membership adaptability, providing them with a strategic advantage (Iden et al., 2017). Ultimately, tech adoption will cause a betterment of the business process as well as the creation of a culture that promotes constant learning, aiming for perpetual success and growth (Ghobakhloo et al., 2012).

Conclusions and Managerial Implications

Management information systems (MIS) are mind-blowing stuff that an organisation can use to conquer the challenges of the day. Starting from their historical development and ending with future tendencies, the MIS improvement of institutions information handling goes through numerous stages (Spathis & Ananiadis, 2005). Institutes, after coupling information collection and processing systems with strategic analysis and operational efficiency technologies, have come to have great data informativeness power

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(Santa et al., 2011). The main players, pivotal moments, and parts in the history of this technology, among other things, have shaped the trajectory of MIS, while the positive outcomes of up-to-date application in various sectors reflect the established usefulness of this technology. By the same token, they are facing technical complexities, organisational integration issues, human factors, security, and above all, cost containment (Ehie, 2002). Hence, proper strategies for managing and mitigating them become inevitable. Nevertheless, by adopting accepted practices and developing new trends such as artificial intelligence and automation, lucrative opportunities can be accessed for competition and innovation (Chen, 2019). Based on the submissions above, the managerial implications are:

- i. Organisations shall establish a meaningful scheme to implement MIS within their operational systems and systems of making decisions so as to attain maximum results. In doing this, the company should align initiatives with strategic direction and develop an organisational culture that embraces data-informed decision-making.
- ii. Given the rapid pace of technology, it is crucial for managers and employees to engage in continuous learning and development processes to stay up-to-date with the latest MIS trends and tools. Training and professional development programmes for practicing nurses and future nursing professionals, as well as continuous learning initiatives, are required to guarantee a high level of competency and flexibility.
- iii. Risk mitigation strategies that are highly proactive should be integrated to fill the voids concerning cyber vulnerabilities, the privacy of data, and technological disruptions. This includes risk evaluation, comprehensive security, third-party assessment, and, most importantly, working under regulation.
- iv. The MIS systems of the organisation should aim to have a smooth platform conducive to interactions among the varied aspects of the organization. Through such actions as communication barrier removal, cooperation, and information sharing promotion, MIS is able to add to the effectiveness and synergy of decision-making and coordination in the whole enterprise.
- v. Organisations should be ready to become constant innovators and maintain the adaptability to explore and exploit MIS fully. Searching and implementing the latest technologies, exploring

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uncharted territories, and fostering a work environment that views failures as essential steps towards success are all part of this process.

- vi. The managers should be able to foresee in the field of MIS what the future holds and, at the same time, take advantage of all possibilities that are emerging by streamlining the organizations. Being on the cutting edge means being a step ahead; futures are not only set to grow but to grow too, maintaining an edge and an active but competitive growth.

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