Journal of System Management (JSM)
Online ISSN: 2538-1571, Print ISSN: 2322-2301
11(2), 2025, pp. 81-94

Received: 18/08/2024
Accepted: 15/10/2024

RESEARCH ARTICLE **Open Access**

Presenting the Model of Intelligent Sales Management System in Metaverse

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Abstract
The intelligent sales management system in Metaverse is the concept of performing sales operations, using smart contracts, machine learning, intelligent process automation and direct monitoring of all network members in Metaverse.The aim of the current research is to provide a model of intelligent sales management system in Metavers. In the qualitative research, the statistical population includes experts in the fields of business management and information management, and the sample size was calculated and carried out according to the theoretical saturation point of 14 people using the snowball sampling method. Data collection was done through semi-structured interviews with experts and analysis. Data were collected using open, central and selective coding method. The findings obtained in the qualitative research showed 112 codes, 29 concepts and 9 categories, which led to the presentation of an intelligent sales management system model in Metaverse.
This research led to the presentation of a new model of intelligent sales management system.
Keywords: Intelligent management system, Metaverse, Foundation data.

Introduction

Metaverse is a big digital currency technology that has gained a lot of popularity around the world today. Metaverse is a collection of every virtual world that is built with the help of blockchain technology (Bell et al., 2023). Metaverse is a safe investment and away from problems. Metaverse is a vast network of virtual worlds used by an unlimited number of users, which has created a greater demand for goods and services, thus creating jobs for developers. , it facilitates designers and making money from Metaverse (Jiang and Danish Shahab, 2023).In the process of buying and selling in Metaverse, possibilities such as safe transaction process, variety of currencies used, possibilities of monitoring the market and prices, and the possibility of negotiation for pricing have been provided.Metaverse is used as a security tool for online shopping, but it should be noted that this tool also has limitations (Chiehai and Shimol, 2023).Shopping in Metaverse requires a valid bank account and a bank card connected to it. If you don't have this information, it isn't possible to use Metaverse for online shopping. Metaverse, like any other tool, has problems such as the possibility of system disruption, the invalidity of some stores; therefore, to ensure the security and validity of the store, it is better to study and check carefully before buying from them. Also, It is better to buy from reputable and well-known stores to minimize the possibility of causing problems in the purchase and avoid any fraud (Visnobuana, 2023).

Attracting customer trust in online sales can be considered one of the most difficult and, of course, the most important steps in setting up an online business in Metaverse. Despite the convenience and benefits of buying from an online store, the level of trust in online shopping is relatively low. To overcome this problem, it's necessary to observe the key points of building trust in

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sales. Despite the growing trend towards online sales, some customers may be skeptical about these sales due to their novelty. On the other hand, storing sales information digitally, while having countless advantages such as ease of access and lower cost, is still subject to the serious challenge of loss and damage to information. Incidents such as the failure of storage components cause the prepared contract texts to be invalid.

In this research, after studying domestic and foreign articles on the topic of intelligent sales in Metaverse, the following cases were identified as gaps in the research, which have not yet been discussed in that field or have been incompletely stated. The first thing identified as a gap in research, knowledge and information technology operations in Metaverse. It is the science of using programs, software and equipment to process, maintain, store, distribute, transmit and protect information and data in networks. A computer connected to each other in the metaverse space of knowledge is called information technology. Information technology automation is the process of creating software and systems to replace processes. It's repeatable and reduces manual intervention. Robotic process automation is a software technology that makes it easy to automate digital tasks. Office automation is also a computer-based information system that collects, stores, and distributes documents, electronic messages, and other administrative communication sheets among individuals, groups, and organizations. is in charge of work and organizations (Lee et al., 2023).The importance of the current research is in terms of the important and new dimensions and components that are considered in the conceptual model of this research. According to the review of internal and external articles and researches, they are either ignored or incompletely raised. This research is important for the reasons of introducing new variables as described below, which are not considered in other domestic and foreign articles. Since conducting this research in Dubai Metaverse Holding can to a large extent solve the problem of lack of trust, the possibility of fraud, hacking of the sales contract and data theft during sales in Metaverse. It is also necessary. Using smart sales with smart contract components, smart process automation and machine learning can lead to organizational agility and competitive advantage in Metaverse. Some of the major advantages of an intelligent sales management system include security, low cost, high speed, and great variety. The aim of the current research is to present the model of intelligent sales management system in Metaverse, and what is the model of intelligent sales management system in Metaverse? It was raised as the main research question.

Literature Review and background

Metaverse is a compound word consisting of meta, which means beyond, meaning the world, and therefore we can translate this word beyond the world. The Metaverse project is a wide network of virtual environments that are always active and online, where people can use avatars. By themselves or with the help of augmented reality glasses, communicate with each other and the surrounding digital objects. In other words, it's a combination of virtual reality, multiplayer online game and web browsing (Visnobwana, 2023). The results of several decades of research have shown that the quality of online interactions improves by creating a sense of real presence in this space. This sense of presence is also created through virtual reality technologies such as head-mounted displays. The second important concept that makes Metaverse different from our current experience of the Internet is "interactivity". (Rodriguez and Peterson, 2024).Smart sales management system is very important for businesses. This method can help businesses improve customer satisfaction and increase sales. An intelligent sales management system is a process that uses data and technology to improve decision making and sales performance (Das Vedata, 2024). Intelligent sales management system

is the concept of performing sales operations on the blockchain platform, using smart contracts, machine learning, smart process automation and with direct monitoring of all network members.Intelligent sales management system can be defined as a data-based approach to sales (Fistas Lopez et al., 2024).

This approach uses data related to customers, market and industry to identify trends, predict customer behavior and make intelligent decisions. Today, smart selling has become a necessity for successful businesses in the metaverse. Businesses that use an intelligent sales management system can gain a competitive advantage in a competitive market (Kaur et al., 2024).Ramezani et al. (2022) believe that the metaverse or the outer world is the newest word and concept that has attracted and occupied the imagination of the global technology industry. Darabpour (2023) showed in their research that the links between the financial, virtual and physical worlds are more connected than ever. Shahabadi et al. (2023) investigated the opportunities of e-commerce in Metaverse in their own research. which is considered fundamental in terms of purpose. Rach (2023) believes that the effectiveness of advanced technologies has a positive impact on marketing and sales system automation.

Butcher et al. (2024) in their research investigated new digitalization strategies, intelligent sales and product service systems, and intelligent delivery.Biancozzi et al. (2024) believe that businesses should use a new and smart business model in their smart sales management system processes. In this context, smart startups are a successful example of smart business in sales and service provision due to the production of shared value. Festas Lopez et al. (2024) believe that the skill and ability of employees in using and applying digital technology will have a positive effect on the company's sales system.

Das Vedta (2024) examined the influence of habit variables and pleasurable motivation on customer behavioral intention and smart sales in passenger car dealerships in his research.

Research Methodology

In the qualitative research method, the goal is to identify, classify and extract concepts based on the study of texts or based on the views of experts. Therefore, the main tools of data collection in the qualitative research method are interviews or library studies.

The systematic approach of Strauss and Corbin has been used in this research. Database theorizing is based on structured approach based on 3 types of open, central and selective coding. In open coding, the main categories and themes around the studied phenomenon are identified. In focus coding, categories are systematically refined and linked with subcategories. Finally, through selective coding, the research paradigm model is presented. A paradigmatic model includes causal conditions, contextual conditions, intervening conditions, strategies, and consequences. The community of participants in the qualitative research method of this study included experts in the field of study in the fields of business management and information management. Theoretical saturation was used to determine the sample size. Theoretical saturation is a point in qualitative research that indicates the adequacy of the collected data for analysis and presentation of the final report. The theoretical saturation point deals with the repetition of data in research, and this repetition of data and the results obtained from it, in methodology, indicates the reliability of the research method. During the interview process, theoretical saturation was achieved in 14 people. The snowball sampling method was used to select the sample. In this method, the researcher took help from the sample members to know other sample people. In this method, first a qualified person who had scientific articles in the fields of metaverse, smart business, smart sales was identified and then he was strongly requested to introduce a similar person. The specifications of the sample were as described in Table No. 1:

Table 1.
Specifications of the sample of experts

Area of activity	years	gender	education	string	connoisseur	Area of activity	years	gender	education	string	connoisseur
Industry and university	24	woman	Ph.D	Information management	The eighth expert	Industry and university	14	man	Ph.D	Business management	The first expert
Industry and university	22	woman	Ph.D	Information management	The ninth expert	Industry and university	16	man	Ph.D	Business management	The second expert
Industry and university	19	man	Ph.D	Information management	Expert 10	Industry and university	24	woman	Ph.D	Business management	The third expert
Industry and university	21	man	Ph.D	Information management	The eleventh expert	Industry and university	19	man	Ph.D	Business management	The fourth expert
Industry and university	14	woman	Ph.D	Information management	The twelfth expert	Industry and university	16	man	Ph.D	Business management	The fifth expert
Industry and university	18	Man	Ph.D	Information management	Thirteenth expert	Industry and university	23	woman	Ph.D	Business management	The sixth expert
Industry and university	25	woman	Ph.D	Information management	The fourteenth expert	Industry and university	16	Man	Ph.D	Business management	The seventh expert

In general, qualitative research should be reliable so that it can finally show accuracy in the process and appropriateness in the final material. Goba and Lincoln have proposed four indicators to check the credibility of qualitative research, which shows the following steps of the credibility of this research.1. Acceptability: To evaluate this stage, the researcher studied the selected documents for almost 3 months, and during the research, there was continuous back and forth interaction between the data and analysis done by the researcher and the opinions of experts on the subject of the research.

Research Findings

After open coding, it's time for axial coding or second level coding. This process is used to communicate between categories and sub-categories and enables the emergence of a conceptual framework. It's created by using a special model or paradigm and by determining the causes, contexts, possibilities, bases, correlations, interactions, consequences. The following table shows the axial and selective coding.

Table 2.
Axial and selective coding.

experts	**Concepts**	**Categories - sources**	**axis**
1-4-6-8	Information technology knowledge	Information technology capabilities (Lee et al., 2023), (Senmart et al., 2024), (Zhan et al., 2024)	Antecedents
5-8-9-11	IT operations		
6-8-9-13	Information technology tools		
9-11-14	Social intelligence	Business intelligence (Bucher et al., 2024), (Biancozzi et al., 2024) (Kuba et al., 2024), (Qazinouri et al., 2024)	Antecedents
7-9-11	Strategic intelligence		

experts	Concepts	Categories - sources	axis
3-5-7	Digital marketing	Metaverse Marketing (Jiang Barrera and Denish Shah, 2023), (Abarkoh Larbi, 2024), (Aliyo and Kadiro, 2023) (Kumar et al., 2024), (Smail, 2024), (Hao and Liu, 2024), (Guda et al., 2024) (Abdul Khalil Wa, 2024), (Saputra et al., 2024)	Antecedents
2-6-8	Smart marketing		
8-10-14	Augmented reality marketing		
3-5-7	Collaborative	Organizational culture (Cuesta Valinio and colleagues, 2024), (Ehsan, 2024)	background
1-6-11	Stability and integrity		
4-6-8-10	Flexibility		
2-4-9-10	Human resources	Organizational resources (Cheng et al., 2024), (Zahed and Nauman, 2024)	The interlopers
3-6-8	Financial resources		
9-10-12	Physical resources and services		

Table 3.
Axial and selective coding.

experts	Concepts	Categories	axis
12-14	Smart sales contract	Dermatavers intelligent sales management system (Kaur et al., 2024), (Fistas Lopez et al., 2024), (Das Vedta, 2024) (Rodriguez and Patterson, 2024), (Dovidi et al., 2024), (Cheng et al., 2024), (Antonino et al., 2024)), (Zirar et al., 2024), (Frau et al., 2024) (Fernandez et al., 2024), (Moderno et al., 2024), (Rach, 2023), (Mighty et al., 2024), (Chakraburty et al., 2023), (Lee et al., 2024), (Kamat et al., 2024)	Central phenomenon
14	machine learning		
2-4-6-8	Intelligent process automation		
10-11-13	Strategic business alignment	Digital transformation in the company (Troisan et al., 2024), (Melleh et al., 2024)	Strategy
1-2-6-9	Infrastructure management		
11-12-14	User relationship management		
3-8-9-12	Quality of service	Sustainable competitive advantage (Al-Khatib and Valeri, 2024), (Lee et al., 2024), (Gomeztrogio et al., 2024)	Consequences
13	Product innovation		
14	Communication with the customer		
1-3-5	Superior performance		
3-5-6-9	Superior performance	Organizational agility (Motwani and Katatria, 2024), (Jamal et al., 2024), (Gholtom et al., 2024)	
1-3-4-6	Rapid adaptation of production/services		
5-7-8-11	Dealing with problems quickly		
4-7-9-11	Quick decisions		
9-11-13	Redesigning the organization		

The paradigmatic model represents the final result of qualitative analysis using the database method. In this model, the categories identified by axial coding and open coding were displayed in the form of a systematic pattern as described in Figure 1.

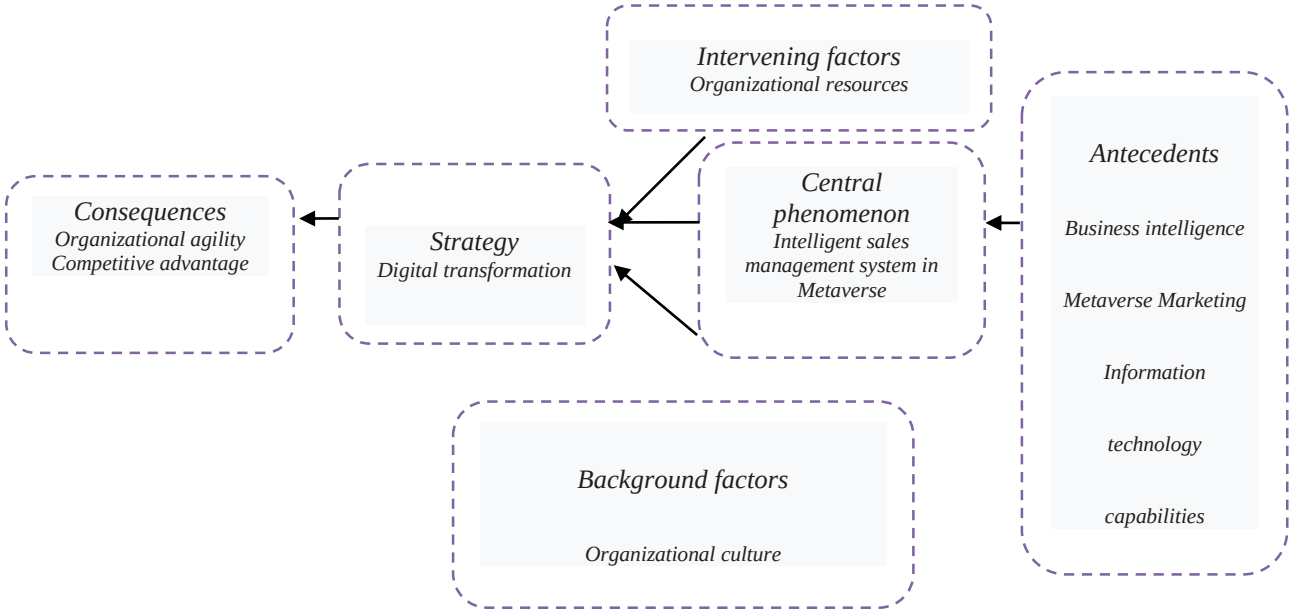

Figure 1. *Research paradigm model*

Discussion and Conclusion

The systematic approach of Strauss and Corbin has been used in this research. Database theorizing is based on structured approach based on 3 types of open, central and selective coding. The community of participants in the qualitative research method of this study included experts in the field of study in the fields of business management and information management. Theoretical saturation was used to determine the sample size. Theoretical saturation is a point in qualitative research that indicates the adequacy of the collected data for analysis and presentation of the final report. The point of theoretical saturation refers to the repetition of data in the research, and this repetition of data and the results obtained from it, in methodology, indicates the reliability of the research method. Theoretical saturation was achieved in conducting the interview process in 14 people. The snowball sampling method was used to select the sample. In this method, the researcher took help from the sample members to know other sample people. In this method, first a qualified person who had scientific articles in the fields of Metaverse, smart business, intelligent sales was identified and then he was strongly requested to introduce a similar person. After interviewing the sample, reaching theoretical saturation and data analysis, finally 112 open codes, 29 concepts and 9 categories were identified and finally a Paradigmatic model was drawn. Intelligent sales management system in Metaverse is one of the new methods of making foreign exchange income. Using the power of virtual reality, brands can create immersive experiences that engage and inspire customers, build stronger relationships, and increase sales. Businesses must use new and innovative methods to succeed in the competitive market. One of these methods is the intelligent sales management system. Markets are changing rapidly. Customers have new expectations and competitors are also innovating (Rodriguez and Peterson, 2024). Intelligent sales management system is the concept of performing sales operations on the blockchain platform, using smart contracts, machine learning, smart process

automation and with direct monitoring of all network members. (Fistas Lopez et al., 2024).

That can help businesses improve customer satisfaction and increase market share. (Das Vedta, 2024).Information technology capabilities are one of the antecedents influencing the intelligent sales management system in Metaverse. which is considered as a company's ability to use information technology resources in the entire company (Zhan et al., 2024). The ability of information technology is very effective on the company's conscious sales performance. These capabilities include three components of information technology knowledge, information technology operations, and information technology tools (Mao et al., 2020). Information technology knowledge refers to the science of using programs, software, and equipment to process, maintain, store, distribute, transmit, and protect information and data in connected computer networks.

Having a suitable infrastructure of information technology can affect the level of information technology knowledge in the field of intelligent sales. Information technology infrastructure is a set of hardware, software, network and services that are required to maintain, launch and manage a system. Information technology operations is another identified concept affecting the intelligent sales management system, which is the concept of processes and services that the company's sales and information technology employees provide to internal or external customers (Weded, 2023). Another identified concept is information technology tools.

Information technology includes a set of information tools, including remote communication tools, visual and audio tools, and related machines with knowledge, skills, and methods of using them in the production, processing, and documentation of information in order to transmit necessary and sufficient information in It's about the company's products to customers, which can affect the company's intelligent sales management system (Zhan et al., 2024). Today, information is the main pillar of the company's power and information technology, a competitive tool and superior technology in the metaverse. By creating new and appropriate communication networks, information technology paves the way for easier mobility of technical, professional and financial services to customers. Therefore, the information technology capabilities of the company can be used to improve intelligent sales to target customers in Metaverse. Metaverse marketing is another identified precursor that includes digital marketing, smart marketing and augmented reality marketing (Abarkoh Larabi, 2024). Metaverse marketing refers to the use of virtual reality, augmented reality and other interesting technologies to promote products and services that are used in the virtual world with the aim of increasing sales or branding. (Saputra et al., 2024).Basically, digital marketing refers to all the things done in the marketing process, which are done on the internet and through channels such as social networks, search engines, e-mail and other things. These platforms can establish effective business communication with people and customers. Digital marketing actually focuses on technologies that focus on digitizing marketing processes and digital data processing (Saputra et al., 2024).Digital marketing, by using technologies that are referred to as interactive technologies, creates a peaceful and active relationship between customers and businesses in the metaverse environment. The result of which will be an increase in intelligent sales in the company. Smart marketing is another component of metaverse marketing. which is referred to as the intelligent use of equipment and information systems to facilitate marketing activities with the aim of making accurate and reliable decisions (Haw and Liu, 2024).

Augmented reality marketing is another component of Metaverse marketing that is used by companies to combine the real world with online advertising. This marketing method is used as an ideal way to convey persuasive messages to the audience. Augmented reality is an emerging trend in

marketing and sales strategies that allows brands to provide unique experiences to customers conveniently using mobile devices (Esmaeil, 2024).Augmented reality also works as a bridge between experience and action. Augmented reality can be used to provide a digital experience for promoting products and services in the metaverse. The customer's digital experience can be defined as the feeling of a customer from the package of his interactions with the organization in the digital environment (Kumar et al., 2024).In augmented reality marketing, users are allowed to see the products in their real environment virtually and view the product details before buying. As a result, this issue leads to increasing user confidence and reducing product returns. Augmented reality marketing can be a way to improve the shopping experience of Metaverse users. By using this technology, users can check the products in more detail and choose the best option. By using augmented reality, the user can see the products in the real environment with all the details, dimensions, colors along with other objects.Business intelligence is another effective precursor to intelligent sales management system in Metaverse. which consists of two components of social intelligence and strategic intelligence.

They do If the employees of the sales team have a high level of sales intelligence, they will be able to make the best use of the two characteristics of active listening and interpersonal cooperation in social interactions with customers in the virtual space and Metaverse, so that they can make effective sales (Shen et al. , 2022). Strategic intelligence also plays a very important role in strategic organizational decision-making and helps to improve the decision-making process of an organization in formulating sales policies and customer relations. This type of intelligence can help sales team employees to make their decisions based on detailed information about the characteristics, needs and behaviors of customers and make informed and intelligent sales (Rodriguez and Peterson, 2024).

According to the opinion of experts and the review of articles, Dermtavers intelligent sales management system was identified as a central phenomenon. An intelligent sales management system is a process that uses data and technology to improve decision making and sales performance (Das Vedata, 2024). The intelligent sales management system is the concept of performing sales operations on the blockchain platform with direct monitoring of all network members. which consists of three components of smart contract, machine learning and smart process automation (Fistas Lopez et al., 2024). Markets are changing rapidly. Customers have new expectations and competitors are also innovating (Rodriguez and Peterson, 2024).Accordingly, the intelligent sales management system will be very important for businesses. This method can help businesses improve customer satisfaction and increase sales. (Das Vedta, 2024).The smart sales contract is a program that can be stored on the blockchain and activated in some predetermined conditions (Antonino et al., 2024). These contracts are used to automatically execute the sales agreement. These contracts automatically activate the work process and when the conditions are met, the next activity starts (Frau et al., 2024).Intelligent process automation (IPA) is an efficient system that uses advanced technologies of artificial intelligence and data analysis to perform work processes automatically and intelligently. This system uses different artificial intelligence algorithms and models to recognize patterns, predict events, make decisions and implement appropriate actions with customers (Fernandez et al., 2024). Machine learning is also a type of artificial intelligence that provides the possibility of self-learning from sales data and then applies it to another task without the need for human intervention (Lee et al., 2024).In this research, digital transformation was considered as the strategy of intelligent sales management system in Metaverse, which consists of the components of strategic business alignment, technology infrastructure management and customer

relationship management (Lee et al., 2021). Digital transformation is the integration of digital technology into all areas of business, focused on changing the way operations are performed and delivering value to the customer. This integration causes fundamental changes in performance and the way of providing value to the customer.

Digital transformation eliminates the gap between the digital customer's expectations and the actual value delivered to him.Today, active businesses in the Metaverse use this strategy to improve productivity, control costs, and improve organizational values (May et al., 2024).One of the main benefits of digital transformation is the ability to track metrics and analyze data that is generated throughout the digital marketing process. Using the insights gained in this field allows businesses to optimize their strategies and processes and get better results. (Meleh et al., 2024).Competitive advantage is one of the other identified outcomes, which consists of the components of service quality, product innovation, customer relationship and superior efficiency. Competitive advantage is the value that a business offers to its customers. Value that includes services or attractions not offered by competitors. A loyal customer is formed because of competitive advantages (Hale and Jones, 2010).Competitive advantage has features such as durability, high defense capability, suitable tolerance, tolerance capability, high biological capability, high support capability, high acceptability, power of justification and proper persuasion, and considerable negotiation power. which, of course, according to the strength and stability of the competitive advantage, all or some of the above features will be present in it (Al-Khatib and Valery, 2024).Competitive advantage can be one of the most important factors in the long-term success of a business. When a business can perform better than its competitors, it is natural that the income and economic growth of this business can increase. This is because competitive advantage can bring in new customers, retain loyal customers, and find ways to serve target markets and save costs, while also generating significant revenue (Gomeztrogio et al. , 2024). Organizational agility can reduce the time it takes to bring a new product to market. Productivity improvement coupled with a continuous improvement strategy helps businesses make the most of organizational agility to innovate, adapt, and implement improvements in their products and services. Modern consumers have high expectations.

The focus of organizational agility refers to the organization's ability to quickly adapt to new ideas, new technologies, changes and fluctuations in the business environment. The most important characteristic of an agile company is to pay attention to customer needs. The most important principle for the dynamism of a company is to be customer-oriented. Agile companies focus on customers and their needs. Every successful business knows when to be flexible and when to change its path to adapt to the force of external environments (Motwani and Katatria, 2024).Additionally, agile practices incorporate the ability to make internal changes to the business when necessary. At the heart of any agile business, customer focus, or placing customer needs and customer value, is a key priority. Companies that possess business agility are in a better position to attract new customers and retain existing customers, allowing their business to thrive. The ability to respond and react quickly and successfully to environmental changes is just one of the benefits of agility. Agility embraces aggressive and incremental change. (Galtoum et al., 2024).

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