



# DIGITAL TRANSFORMATION OF BUSINESS AND INFLUENCE OF ARTIFICIAL INTELLIGENCE

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## ABSTRACT

*Business environment is expanding and developing day by day. Due to these development and drastic changes in business's both internal and external environment, every organizations are trying to survive and to stand successfully in Environment. In such a situation, organizations are focusing on to the future scenario of business's growth and development. Digital transformation is a Mile stone in the Corporate world. It is a socio-technical process of applying digitizing techniques to broader social and institutional contexts that offers a technology based infrastructure for Businesses involved .*

*Digital transformation is backed with Digitalization, where Artificial Intelligence is a core technology based on the same . It will helps in accelerating the digitalization of Supply Chain Management also. Most of these digital applications are processing and maintaining through cloud .Cloud networking is also a dominant technology, like Artificial Intelligence.*

*This paper attempts to make a theoritical descriptive explanation on the digital transformation of business and ascendancy of Artificial Intelligence. It also tries to look into the relationship between digitalization and Artificial Intelligence.*

**Keywords : Digitization , Digitilization , Artificial intelligence , Cloud network , Digital transformation**

## **INTRODUCTION**

Every Successful business requires a simple thing. That is, surviving in the competitive world and move along with the drift in technology .The pace of growth and development of technology is fastly swaping the mode of business. Due to several innovations new trends are emerging in the market. Organizations are trying to follow all those trends in order to keep a position in market.

One of the notable change in corporate field is occured by the invasion of technology. As all the organisations are attempting to follow the trends prevailing in market, the level of competition in corporate sector is tremendously hiking. For surviving among the rivalry firms, innovative ideas should initiate, especially regarding technology. Technological upgradation should followed by organizations and the transformation to digitalization .Digital transformation is a mile stone in Business world. Digitalisation process will helps the business activities by leveraging technologies , which ultimately results in increased opportunities and revenue .

AI is an extension of Digitalisation , where the science can support machine and human tasks . It will assists in increased revenue , better talent management , better quality and Reduction of human errors. AI is now assumed as the future of the business . It is because , the technology develops, the world will see new startups, numerous business applications and consumer uses, the displacement of certain jobs and the creation of entirely new ones.

## **SIGNIFICANCE / IMPORTANCE OF STUDY**

As the business environment is growing and developing day by day every corporates are trying to improve their working environment both internally and externally. As the technology is expanding and maturing its branches everywhere, it's very hard to survive without moving along with the same .

At present , Global positioning and international expansion is getting more relevant . for staying ahead the competition it is necessary to move along with the trends of market . Organisations across all industries are enjoying the benefit of digitalization and digital transformation . several studies mentioned that almost 90% of the businesses are now following advanced techniques and operating with assistance of AI , Cloud techniques , etc... For many companies transferring data to a public , private or hybrid cloud environment lowers the cost , and that's why they are focusing to transformation of the same .

Utilizing digital technologies to develop fresh or adjust current business practices, cultures, and consumer experiences to satisfy shifting market and corporate needs. Automation of warehouse and retail operations will be made possible by AI-powered digitization, which will also optimize processes like merchandising,

product assortment, and micro space . AI is considered as a driving force behind the digitalisation . Across all industries it is considered that Digitalisation is Future of business .

This paper attempts to make a theoretical descriptive explanation on the digital transformation of business and ascendancy of Artificial Intelligence. It also tries to look into the relationship between digitalization and Artificial Intelligence.

## **REVIEW OF LITERATURE**

- On 13<sup>th</sup> February 2021 , Fotis kitsios and Maria kamariotou of Department of Applied Informatics, University of Macedonia, GR54636 Thessaloniki, Greece published a paper on topic Artificial Intelligence and Business Strategy towards Digital Transformation.

The paper aimed to implement and review the correlation of AI and corporate strategy and to provide framework for interrelated issues prevailing in the same field. Here, it also mentions about the changes that have taken place in the field of AI in previous years, and the obstacles associated with the acquisition of the business value through the use of higher level technology. While looking to the correlation of AI and business strategy, it will raise queries like what is the motivation behind the adoption of AI and about the implications and advantages of using AI in business . This study's findings suggest that the relationship between the two will help managers be more attentive of the opportunities, challenges, and benefits that AI can bring to their companies as they get new information.

- On 2020 , a study is conducted on the topic “ Role of AI within the scope of digital transformation in enterprises” by M.Hanefi calp of Karadeniz technical University ,Turkey. This study is carried out in order to provide a better service , which has become necessary. However, the technology and methods employed in this transformation may change depending on the company volume and demands. The digital transition will currently be significantly aided by activities based on artificial intelligence. The various applications of artificial intelligence technology include search, reasoning, problemsolving, perception, learning, estimating, analytical thinking, optimization, and planning. This chapter attempts to demonstrate the impact of artificial intelligence methodologies on the processes of digital transformation utilized in businesses while taking into account the difficulties experienced during the actualization of the transformation. The study is expected to increase awareness and provide a viewpoint for other research on digital transformation.

- On 2019 , D.Ulas submitted a paper under Unkara University,Turkey on the topic Digital transformation process and SMES

The study relates the basic goal of digital transformation which is to reorganize organizational operations through the use of digital technologies, resulting in advantages like increased productivity, lower costs, and innovation.

the reality that traditional company models are vanishing and being replaced with knowledge-based, flexible, dynamic, and quick to react to consumer behaviors business models. The importance of SME's performing cost-benefit analyses of digital technologies and being knowledgeable about those technologies When the effects of Industry 4.0 on business are examined, it is seen that production and manufacturing processes are becoming more realistic. Today, people and SMEs who keep up with that technology era are the ones who can stay afloat in the quickly expanding digital era...The primary goal of digital transformation is to reorganize organizational operations using digital technologies , resulting in advantages like increased productivity.According to empirical studies on SMEs, these companies exhibit irregular investment patterns i n information and communications technology (ICT) and require outside assistance to fully integrate digital tr ansformations into their entire business strategies.

- Jonny and Holm strom presented paper on topic “From AI to Digital transformation” , at Swedish center for Digital innovation, Department of Informatics, UMEA University , Swedan .

The study focus on the performance outcomes related to AI which are obviously important, but they are only one aspect of AI governance. Additionally, our study has demonstrated that , occasionally , performance dips caused by AI-Mediated digital change to enable sustainability over the long run,therefore flexibility must be taken into account in addition to performance.It is intended to assess an organization's AI preparedness.ed to make such consideration easier by providingevaluation of a company's digital potential.Technological change in four important areas:goals, rule s, activities, and boundaries. so that it can be utilized to assist businesses create and develop by enabling their AI-based business opportunities more thorough digital transformation mapping Possibilities and obstacles

## **OBJECTIVES**

- ❖ To study the effect of Artificial Intelligence in business transformation
- ❖ To study the relationship between Artificial Intelligence and digitalization
- ❖ To know the digital transformation processes in business

## **LIMITATIONS**

❖ Generalized content based on secondary data and assumptions

❖ No application of any parametric and non-parametric tests

## **DIGITAL TRANSFORMATION OF BSS AND INFLUENCE OF AI.**

Digital transformation is a mile stone in Business world. Digitalisation process will helps the business activities by leveraging technologies , which ultimately results in increased opportunities and revenue .AI is a contribution of digitalization , where science supports both human and machine jobs.It will contribute to more sales, better talent management, higher quality, and a decrease in human errors. Digitalisation is considered as a socio technical programme or otherwise process that ultimately focus the improvement of an entity by setting off the significant changes to its properties through combinations of information , computing , communication and connectivity technologies . Application of Digital Technology in the business means the leverage between technology and business process . Those leverage will helps the business in attaining higher productivity and in surviving among the competitors .Digital Technology in business promotes the paperless transactions and processing and assists in cloud storage and AI.

**John McCarthy** is recognised as the Father of Artificial Intelligence .

**AI** is one of the core technology in Digital transformation, which helps in increased business growth. AI helps in accelerating the digitalization of Supply Chain Management environmental impact.

AI application in business is mainly for automating business processes , Gaining insight through data analysis and engaging with customers and employees .

### **DEFINITIONS :**

<b>TERM</b>	<b>DEFINITION</b>
Digitization	A technical process of transforming analog formats to digital formats  <b>Digitization</b> is the process of changing from analog to digital form (Gartner, 2018)
Digitalization	A sociotechnical process of applying digitizing techniques to broader social and institutional contexts that render digital technology infrastructure .



	<b>Digitalization</b> is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities, (Gartner, 2018)
Digital transformation	The profound transformation of organizational activities , boundaries and goals to leverage the opportunities of digital technology.  An effort to enable existing business models by integrating advanced technologies (McKinsey, 2020)
Artificial Intelligence (AI)	Intelligence demonstrated by machines , as opposed to the natural intelligence displayed by animals including human.( (homston, 2019)

### **EFFECT OF AI IN BUSINESS TRANSFORMATION**

AI applications are useful in developing business systems of all organization.

While a company is making fundamental changes in its mode of operation especially focusing on to the progress of both operational and financial sectors of business, AI will assist them to be triumph. AI is supporting E-Commerce , mainly B2B, B2C systems . B2C (Business to Consumers) system includes much of the transactions relate to AI. It is mainly used for Product selection and recommendation , negotiations , auctions , solving real world problems , generating automated responses , etc... are the assistance providing by AI in E-Commerce B2C transactions .

Likewise, B2B transactions are also there . Artificial Intelligence mostly supporting Supply Chain Management (SCM) where it will helps in easier movement and storage of goods and services and also order fulfillment from point of origin to point of consumption . It helps in providing an integrated Supply chain sytem which will makes a business to share real-time information and significantly reduce the carrying cost of the same . Several number of AI based supply chain problem solving approaches are available . To the greatest extend , it's all relate to agent based . Agent based approaches treat the issue as a centralized constraint –satisfaction problem . Sub-contracting system assistance is also providing by AI . Such system , the Supply Chain Coordination is transformed to Virtual Supply chain in a multi- agent system through the negotiation process among software agents .

### **RELATIONSHIP BETWEEN AI AND DIGITALISATION**

Digital transformation means the transmission of analog to digital form. The information and processes of business are digitalized. The main advantage if adopting the digitalization process is the proliferation of

systems. Digital transformation is the essential first step to be followed as prior to the movements towards innovations and through AI.

AI is considered as one of the core technologies in Digital transformation. Data requisition is an integral part of Artificial Intelligence .when there is no data, means , absence of Artificial Intelligence. AI is considered as a Data Driven Technology which mainly focuses the data analytics. It will helps in system integration and also redefines what all can be digitalized.

A fusion of both AI and Digitalisation is essential for the survival of the business in this competitive and developing business environment. This impacts every functions of the organization, both, internal and external . Efficient and effective B2B (Business to Business) assistance is also possible through the combination of these two components. AI and digitalization's applicability shows the innovated business practices .For surviving in a competitive environment the application of these technologies are very essential. Digitalization and AI are inextricably linked and mutually beneficial. Digitalization is the process of transforming analog data into digital data, which may be more easily processed, stored, and disseminated. Contrarily, artificial intelligence (AI) is a technology that gives computers the ability to learn from data, spot patterns, and make decisions. The integration of AI and digitization is changing how companies run and engage with customers. Businesses may boost productivity, cut expenses, and provide better customer experiences by utilizing these technologies. To be sure they are utilizing these technologies in an ethical and responsible way, organizations should approach AI and digitalization with caution.

A wide number of industries, including healthcare, banking, and manufacturing, have seen substantial advancements as a result of the combination of AI with digitalization.

So, Artificial Intelligence and digitalization is considered as the core part of every modern business.

## CLOUD & AI

Most of AI Applications are created using cloud .But, both AI and Cloud are dominant technology .A fusion of both means unimaginable power to store , manage and process data . Cloud technologies are now enabling the firms to manage data , find patterns and insights in data , create consumer experiences and enhance workflows . The combination of AI and cloud is a hybrid like structure , combining features of both . The fusion of both means a predominant power in business .

Businesses now have the option to store and analyze massive volumes of data on remote servers rather than local hardware thanks to cloud computing. As a result, companies can expand their operations without needing to make expensive hardware updates. Additionally, since employees can access data and applications from any location with an internet connection, cloud computing gives firms more flexibility and mobility. Contrarily, AI enables firms to automate difficult operations and utilize their data more effectively. AI

algorithms can find trends and forecast future occurrences by studying massive datasets. This has a wide range of uses, including tailored marketing in retail, financial fraud detection, and manufacturing's predictive maintenance. Overall, AI enables firms to automate difficult operations and utilize their data more effectively. AI algorithms can find trends and forecast future occurrences by studying massive datasets. This has a wide range of uses, including tailored marketing in retail, financial fraud detection, and manufacturing's predictive maintenance.

## **DIGITAL TRANSFORMATION PROCESS IN BUSINESS**

There are 4 main areas of Digital Transformation, namely, Process transformation, Business model transformation, Domain transformation and Cultural / Organizational transformation. The transformation process for every business seems different, as the organizational culture and structure differs each other.

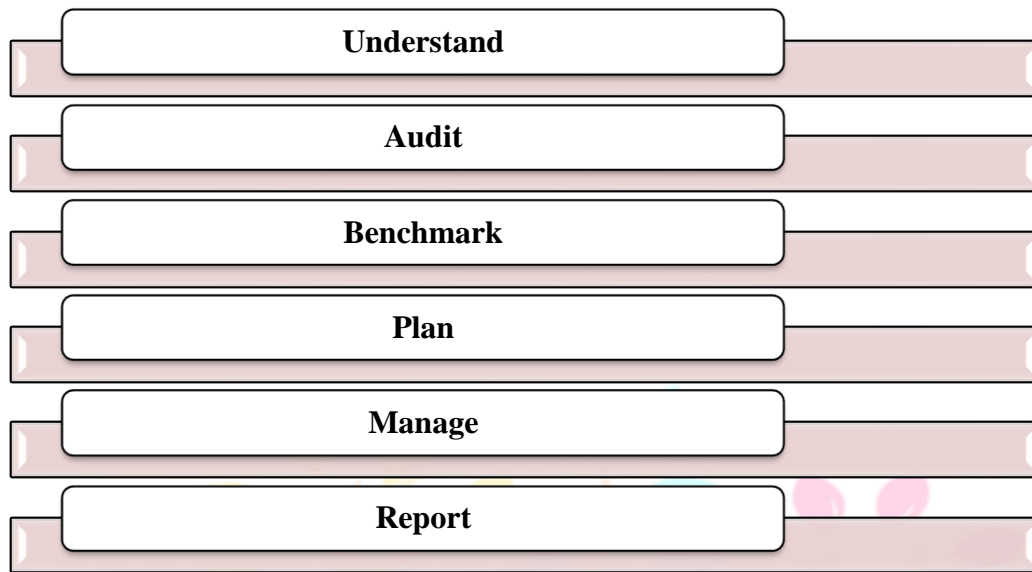
The Processes called as Digitization, Digitalization and Digital transformation are there. Digitization is the process where analog transformation is going on, and consider as the prime step. But, it is not a process digitalization or a Digital transformation. Application of some socio-technical actions in techniques of digital conversion of business is referred as the Digitalization process. Transformation of organizational activities from traditional to digital platform is known as digital transformation. Being a digitalized business is a sufficient action for responding to the upgrading business environment.

Digital transformation is the process of integrating digital technologies into all aspects of a business, which has a profound impact on how those firms run and provide value to their clients. Utilizing digital technologies to enhance consumer experiences, develop new business models, and generate new revenue streams are all part of the process of digital transformation.

A strategic strategy, a dedication to innovation, and continual improvement are necessary for the ongoing and complicated process of digital transformation. Businesses may improve customer experiences, develop new revenue streams, and maintain their competitiveness in an increasingly digital environment by utilizing digital technologies to automate and improve business operations.



## THE DIGITAL TRANSFORMATION PROCESS OF BUSINESS MODEL INCLUDES :



- 1) Understand : Understanding the business goals and where you want to take the business
- 2) Audit : audit your operations to identify the potential risks and opportunities
- 3) Benchmark : benchmark against to your peers to determine where you sit against best out of the whole firms .
- 4) Plan: Develop detailed strategic plans to align IT execution to business strategy .
- 5) Manage: not only identify , but also manage improvement initiatives to deliver real Return On Investment .
- 6) Report : Provide regular business intelligence reporting back to your board and management teams

### Overview of Digital Transformation of business process :

- 1) Digitize documents: Scanning and keeping records of files related to HR records .
- 2) Organize documents: index documents , manage retention of records , provide access to others .
- 3) Automate process : create terms processes
- 4) Streamline process: Create reports of processes to review bottlenecks , large workloads , and other data points .
- 5) Transform process : review reports of processes and make changes based on data metrics to improve overall processes .

### DRIVERS OF DIGITAL TRANSFORMATION :

1. Human Capital : the employees and leaders of an organisation .
2. Governance : the system of rules , practices and processes that help control and direct an organisation
3. Information technology : the technology that already sits with the organisation as well as external technology that can be acquired from outside the organisation .

4. Data : the need for data to be transparent and available and a governance to process data and use it to ensure that accurate , informed decisions are made.
5. Partnerships : the ability of the organisation to forget strategic partnerships with third parties to drive digital transformation within
6. Processes : the processes in an organisation necessary to meet key goals and drive productivity.
7. Customer experience : the experience a customer has when interacting with an organisation's product or services

### **THE BIGGEST OBSTACLES TO SUCCESSFUL DIGITAL TRANSFORMATION:**

- a. Fear of the unknown: change means risk , and risk is scary . Business may be doubtful about what happens if it does not work .
- b. Money : many business feel hindered by budget restraints on their trip into transformation .
- c. Lack of vision: A successful journey down the digital path means having a clear vision of the destination and the ability to communicate that vision .
- d. Inflexible technology : successful digital experience are achieved through iteration

### **ADVANTAGE OF BUSINESS TRANSFORMATION**

- ❖ **Remain competitive:** In the competitive era, it is mandatory to move on with technology so that the business can survive in the corporate world. Competitors may offer new innovative products and services and follows updated technologies in order to hold good position in the market. Therefore, remaining competitive is always an advantage and beneficial factor for the business.
- ❖ **Increase efficiency :** By using advanced technology business can increase their effectiveness and efficiency in all functional levels, such as from manufacturing to delivering the product or service to the customers.
- ❖ **Improves decision making :** Digital transformation of business will always create a better organizational structure , which will help to implement the policies and procedures of the business in an advanced pace. Accordingly, the firm can go with faster and improved decision making too.
- ❖ **Enhanced customer satisfaction:** Once the business starts move along with the development in digital world and starts focusing on digital transformation, it'll help the business to retain the existing customers and create new customers. Responding to customer feedback and interacting with customers will also help to increase satisfaction level of customers.
- ❖ **Increasing customer experience :** By implementing diversified technologies which can explore by the customers in best and possible ways will increase the customer experience. After all, customers has an improved loyalty towards the business , so that they can retain the existing customers easily.
- ❖ **Better audit and compliance management :** Audit and compliance management are very significant for organizations to make certain that they are holding to legal, regulatory and ethical compliances.

- ❖ Efficient utilization of capital assets and infrastructure : Asset utilization, in general, measures how well a company can use its assets to generate money. A comparatively high ratio indicates that the corporation uses its assets well, whereas a low ratio could signify ineffective asset management.
- ❖ Greater innovation : Innovative businesses have a culture that never considers themselves to be good enough, that welcomes risk in the pursuit of improvement, and that recognizes transitory setbacks as an unavoidable aspect of the process.

### **DISADVANTAGE OF BUSINESS TRANSFORMATION**

- ❖ Data security : There is an increased risk regarding cyber attacks and data leakage and spill. As businesses depends more on electronic medias to store and retrieve data, the chance of cyber attacking/Hacking is relatively high.
- ❖ Social exclusion : The main effects of social exclusion on intellectual performance are seen in activities requiring attention, focus, and distraction control. In conclusion, we can anticipate that exclusion will have an effect on behavior, intelligence, social control, self-awareness, and wellbeing.
- ❖ Work overload : The digitalization of work offers several advantages, including greater productivity and the capacity for remote labor. If not effectively handled, it can also result in work overload and burnout. The constant connectivity and need for a fast reaction are two of the key factors contributing to job overload brought on by digitalization. It's critical to set up boundaries around work hours and communication expectations in order to combat the job overload caused by digitalization.
- ❖ Dwindling career opportunities: As business become more digitalized there is a chance of decline in career oppurtunities.
- ❖ Manipulation of digital media : One major drawback of company transformation can be the manipulation of digital media. It'll cause data breaching, sometimes damage to reputation of business and may decrease the productivity due to lose of employees focus on important tasks.  
Companies should be aware of the risks and take precautions to reduce them, such as putting in place robust cyber security measures, keeping an eye on their online reputation, and being open and honest in their marketing and communication strategies.
- ❖ A lack of technological competence: Lack of technological competence will decrease efficiency competitive advantage of the business and It will increase the risk level of business. If the business is not able to cope up with the pace of digitalization business can't survive long.
- ❖ Connectivity issues: Connectivity problems can be a big problem for businesses since they can hinder collaboration and communication, reduce production, and cost them money.

### **ADVANTAGE OF IMPLEMENTING AI**

- ❖ Error reduction: Due to automated processes and usage of predictive analytics AI will helps to reduce errors and duplication. AI powered natural language processing technologies can help to reduce errors.

- ❖ **Difficult exploration:** Difficult exploration or hard exploration refers to the action of an AI system actively seeking out and coming across unusual & challenging and difficult situations, tasks, or data sets that it has never experienced before.
- ❖ **Lowering the cost of training and operation:** Artificial intelligence (AI) can reduce the cost of operations and training in a number of ways, including automation, predictive maintenance, improved resource allocation, continuous learning, etc... Overall, AI can help organisations save time and money by automating repetitive chores, better resource management, and the creation of more individualized and adaptive training programs.
- ❖ **Able to work around the clock:** automating repetitive chores, better resource management, and the creation of more individualized and adaptive training programs.
- ❖ **Fraud-detection software :** In many different businesses, like banking, insurance, and e-commerce, AI may be quite good at spotting fraud. Anomaly detection, Behavioral analytics, natural language processing, machine learning, network analysis, etc... are some of the ways that AI can help with fraud detection. By analyzing massive volumes of data, seeing abnormalities and patterns of behavior, and constantly enhancing its capacity to recognize new types of fraudulent activity, AI can assist in the detection of fraud.
- ❖ **Making wise decisions:** By delivering data-driven insights, assessing complex events, and suggesting the best courses of action, AI can assist in making good judgments.

#### **DISADVANTAGES OF IMPLEMENTING AI**

- ❖ **High cost:** AI deployment can be expensive, but the long-term advantages can surpass the early expenditures. Even though, Implementing proper hardware and software, hiring trained and professionally qualified candidates, usage of predictive analysis, etc....seems to be very expensive.
- ❖ **Lack of personal contacts:** In the sense that it cannot take the place of the interpersonal communication that many people cherish in their daily lives, it is true that AI lacks personal contact. However, there are still many ways in which AI might be applied to improve and enhance human interactions. AI can be used to enrich and improve user and customer experiences, even though it may not be able to completely replace the human element of interactions. Organizations may deliver more individualized and efficient interactions that satisfy the requirements and expectations of their customers by utilizing the power of AI.
- ❖ **Difficult in developing software:** Developing AI software can be a complex and challenging process, but it is not necessarily more difficult than developing other types of software. Developing AI software can be challenging due to the complexity of the algorithms, hardware, data, and interpretability requirements. However, with the right expertise and resources, these challenges can be overcome, and AI software can be developed to solve a wide range of problems and improve outcomes in various fields.
- ❖ **No human replication:** A true artificial intelligence cannot currently be replicated in a human form. The development of complicated task-performing robots is made possible by numerous advancements in robotics and artificial intelligence (AI), yet these systems are still fundamentally distinct from those used by humans.
- ❖ **Increased unemployment:** While AI has the potential to eliminate jobs in some sectors, it can also increase productivity and open up new career opportunities. The possible effects of AI on employment must be taken



into account by businesses and policymakers, who should also engage in training and education initiatives that will aid employees in adjusting to the evolving character of the workforce.

- ❖ **High initial investment:** True, there might be a significant upfront cost associated with developing and using AI systems. High-performance hardware, such GPUs or TPUs, is necessary for AI systems but can be costly to buy and maintain. AI system development and implementation call for specific knowledge in fields like machine learning, computer science, and data analysis. It can be expensive to hire and train qualified workers, particularly where there is a significant demand for AI knowledge.

## **FINDINGS AND SUGGESTIONS**

The study aims at finding out the relationship between Artificial Intelligence and Digitalization, likewise, the effect of AI in business transformation and also to get familiarized with digital transformation process in business. The study reveals that,

- ✓ **AI** is one of the core technology in Digital transformation. AI applications are useful in developing business systems of all organization and it is supporting E-Commerce, mainly B2B, B2C systems
- ✓ AI is considered as one of the core technologies in Digital transformation. A fusion of both AI and Digitalisation is essential for the survival of the business in this competitive and developing business environment.
- ✓ There are 4 main areas of Digital Transformation, namely, Process transformation, Business model transformation. Also included the digital transformation Process of Business model, processes and drivers of digital transformation.

## **SUGGESTIONS**

- Digital transformation will assist the business development and also to move along with the drastic changes happening in the business environment. So, it is very important to choose and implement right technology.
- One of the main objective of Digital transformation is to gain new customers and retaining the existing in the business, so, the firm should pay attention to the customer satisfaction and delightness.



## **CONCLUSION**

This paper “Digital transformation of business and influence of artificial intelligence” aims at identifying and finding out the effect of AI in business transformation, relationship between AI and Digitalization along with the process included in business transformation. The study reveals that the AI is one of the core technology in Digital transformation . AI applications are useful in developing business systems of all organization and it is supporting E-Commerce , mainly B2B, B2C systems. AI is considered as one of the core technologies in Digital transformation. A fusion of both AI and Digitalisation is essential for the survival of the business in this competitive and developing business environment. There are 4 main areas of Digital Transformation, namely, Process transformation, Business model transformation. Also included the digital transformation Process of Business model, processes and drivers of digital transformation.

Digital transformation and AI integration are significantly affecting enterprises. To be sure they are utilizing these technologies in an ethical and responsible way, organizations should approach AI and digitalization with caution.

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