

Digital Transformation Strategies In Different Areas: A Review

Dr. Harjinder Kaur , Amandeep Kaur Bath

Abstract : A digital transformation process consists of information technology implementation and digital transformation strategy. It is based on Internet of Things, Artificial Intelligence and Big Data. Digital transformation is adopted by public as well as private sectors. It affected both manufacture based and service based industries, customers, employees, educational institutes, banking, healthcare, society etc. This paper throws the light on digital transformation, its components, implementation areas of digital transformation and still having challenges in the digital information.

Keywords: Digital Transformation, Cloud Computing, Big Data, Machine Learning

I. INTRODUCTION

Retail industries implement technological advancement to fulfill the needs of customers at proper time. Digital transformation is applied in all the aspects of retail industry [7]. It combines several technologies that are essential for retail customers. It also provides various operations like enhance customer centricity, tackle risk, innovate, increase revenues, new business models, revolving around information and services, data intensive and innovative stack. Moreover, member companies are taking the benefits of huge opportunities. Digital transformation is applicable in government areas like public health care, transport, public infrastructure, policing and defense, citizen services or regulations. In the citizen experience digital transformation becomes an important part of e-governments and digital identity programs. It is cost saving in government as well as public sector. It is difficult to differentiate between the population of local, national and political. Secondly to check out which population is act as workers, consumers or citizens. It reduces the paper work. Digital transformation provides the fruitful solutions to people to solve their problems due to its fast feature. Digital transformation processes are:-

- Design and digitize customer journeys.
- Increase speed and ability in insights.
- Achieve customer adoption of digital customer journeys.
- Develop ability in delivering journey transformation.

It is beneficial to customize to customize the gain, strategies and process of business. It includes both structured and unstructured data which further used in decision making.

Digital transformation improves the skills and knowledge of individuals [4]. These skills are artificial intelligence, augmented reality, cloud computing machine learning, data exploration, growth hacking etc. Various companies invest huge cost on digital transformation instead of a smart investment. Companies are trying to improve the skills of their employees for future growth. Companies affected by digital transformation in the form of social media, analytics and project management interfaces. It connects the business to their customers and satisfies their demands.

II. DIGITAL TRANSFORMATION

Digital transformation is about the contribution of rule based IT system in the economy services. In which way economic activities are operated and the value is formed [1]. This era is a digital era i.e. social networks, mobile, big data etc. are becomes the basic need of everyone. It is the key to transformation of business operations as well any organizational. The society takes the benefits of fast and radical digital technologies. Due to the globalization companies are in the competition according to the customer's demand. Digital transformation is applicable in public governance and private agencies that why various companies are introducing the concept of digital transformation [2]. It contributes in the better performance. Basically the digital transformation is basis on information technology. It is the backbone of the digital transformation. Moreover digital transformation includes organizational structures, management concept and business strategies. Digital transformation is implemented across the world [3]. Digital transformation must be weaved into the fabric of the company. Some business companies stay behind, because of too late adaptation of digital transformation. Cloud computing is the backbone of digital transformation. It is the integral part of technology and business [6]. It manages the various activities of an organization such as how to run infrastructures, save costs and delegate liabilities. Cloud contribute in digital transformation as cost efficiency, unlimited storage, backup and recovery, automatic software integration, easy access to information, quick development, agility, easier scale of services and delivery of new services. Digital transformation consist many services and applications such as internet information searches, electronic commerce, digital economy etc. It improves the productivity and several other benefits like social welfare, particularly on several sustainable development goals, associated with the delivery on public services. Digital transformation involves multiple

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technologies like telecommunication network, software engineering, electronics delivery of government services, electronic commerce, social networks and availability of online information. Digital transformation is applicable in different areas like steam engines, electricity and railways sweeping, sweeping across economist, our societies (local, regional and global communities).[7] Digital transformation has basically four benefits

- Lower cost
- Increase accuracy
- Improve speed
- More efficient

III. COMPONENTS OF DIGITAL TRANSFORMATION

- Big Data : Big data plays a key role in digital transformation. Before enables the digital transformation by any industry or organization, there must be sufficient network infrastructure available [8]. It support the companies by formulate meaningful and strategic adjustment that lower the cost and higher the result. If the interest of the customers is predefined then it is easy to implement according to their needs. It is not possible any digital transformation without big data.
- Machine Learning : It is an artificial intelligence approach that provides systems the ability to improve and learn from experience without clear program [8]. It is basically development of computer programs which can access data and use it to learn. Various industries employees are not well skilled to understand and implement the AI and machine learning.
- Change Management: Big data, Cloud computing, social media and mobile devices are changed the industrial communication and collaboration [8]. Digital transformation is a better aspect to change the management of organization to understand, learn and deliver new digital strategies.
- Cloud Computing: Digital transformation becomes possible with cloud computing. Cloud services, which effectively offer unlimited and dynamic IT resources from the foundation of digital transformation and facilitate rapid business change [8]. Moreover, digital transformation strategies serves to directly increase the effectiveness and benefits of cloud computing.
- Digital Security: Digital transformation gets on the business especially cyber security priority based[8]. Organizations need to maintain confidentiality, integrity and availability of data in premises in the cloud and hybrid environments. The value and volume of data have never been higher and end points are more vulnerable than ever.
- Mobility Management : Digital transformation used the mobility as an essential enabler [8]. There is a lack of strategic planning among various businesses whenever it comes to enterprise mobility management. Organizations are focused on the broader digital revolution for improved efficiencies, revenues and profits, but few are prioritizing mobility management in their plans.

IV. AREAS OF DIGITAL TRANSFORMATION

- Higher Education : Digital Transformation makes communication between students and teachers [9]. It converts the offline lectures into video, creating digital text and quiz. Digitalization is required in students' admission, registrations for programs and courses, examination, program development etc. Smart class is a medium to make the lectures more informative through digital transformation. Moreover remote monitoring and biometric-based authentication is implemented in organization for employees and students. Digital transformation is plays a vital role in institute security. Students can access their syllabus notes from the big data as well as online lectures are provided on YouTube, Google and Amazon. There various websites from where student can ask any question related to study and subject experts assists the students by giving appropriate answer.
- Industries: Digitization is the main approach to establish business models. It includes a variety of channels like retail stores, online stores, mobile stores, mobile app stores, telephone sales etc. in a customer's shopping experience by means research a product before purchase it [10]. Digitization improves the performance of service operations via remote connectivity and enables predictive maintenance, continues uptime, rapid service response etc. It makes possible farther and faster progress for almost everyone. Digitization increases the investment and safety. It also connects the industrial area to smart governance.
- Social Media: Digital transformation provides the facilities of search on Google, watched videos on YouTube, messages sent on WhatsApp, recording on Facebook, sent e-mail etc for the people. It is much faster than other media like postal. Nowadays these all applications are available in ones pocket by means on personal mobile phone. Online shopping makes easier for customers to buys anything by ordering from home. Multimedia replaces the T.V. because every T.V. show is available on mobile apps. Digital transformation creates new jobs for network traffic manager, head of social media, community manager etc. It establishes the communication between companies, job boards and communication agencies [11]. It provides new and exciting way to emerging technologies through existing technologies. It connects the organization and individuals at international level. All reliable and trustworthy information can be accessed online by any one. It support by assisting the customer and suggest the appropriate suggestion [12].
- Healthcare : Digital transformation enables medical devices to electronic record of the

health of patient. It reduces the human errors and implements the recent digital strategies. It gives the patient better treatment with medical devices. Sometimes patient needs on-demand checkup due to the busy schedule, then prior appointment through digital transformation makes it possible. Moreover, digital transaction is used to save the patient record on big data and cloud identifies the patient whenever doctor needs the history of the patient. It is also beneficial for pharmaceutical representative to sale their medicines by advertising through digital transformation. There are various health sensors such as heart rate sensors, exercise trackers, sweat meters, oximeters etc. are helpful to check out illnesses and diseases can effected in the future to patient. Artificial Intelligence powered tools are performed routine tasks that can be done by any nurse in a hospital [13]. Digital marketing strategies are used at high volume in healthcare. It engage the patient to the medical facilities with valuable benefits [14].

- Banking : Digital Transformation offers products and services directly to the customers, companies and financial institutes. Automated financial device also helps the individuals with low income. Change in new technologies only implemented by the bank when financial market or individuals do not disrupt. Banking reduces the gap between customer's satisfaction and expectations. It is featured by simplicity, transparency, ease to customer acquisition, ease to distribution and commercial attractiveness and specialization. Various mobile and web technologies are available in this digital era for banking transactions like end to end digital banking, digital investment services, electronic trading, online cash management etc.[15]. Banking activities are performed using plastic money like credit cards, debit cards, smart cards etc. Furthermore, electronic channels like automated teller machine, telephone, internet, social media etc. provides banking services to the customers [16].

V. CHALLENGES IN DIGITAL TRANSFORMATION

- Changing Customer Experience: Customers have both experience online and offline stores, customer measures the services with their competitors. Many people who faced bad experience leave without any complaining and any clue. To improve the customer ration it will take many years. Sometimes customers change their interest due to the implementation of new digital services [17].
- Employee Pushback: Nothing is possible without the support of entire organization. When employees change the organization it is a big drawback and new appointed employees take time to understand the culture of the

organization. Moreover, there is a lack of skilled people according to digitization. Already appointed employees have a need of training to update the knowledge and skill [17].

- Omni channel Adaptation: Customers jump from channel to channel by attracting the services provider. They will search on websites and mobile devices for new digital services. Vide variety of channel misguide the customers by attractive advertisements. The risk can be occurred on both level organizational level as well as customer level [17].
- Failing or Poor Analytics: Modern companies are disappointed with their analytics abilities. Companies collected more data and failing to decide the accurate one that causes the end in disaster. Older analytics systems are not appropriate in this modern era. Authorities of organizations are unable to take the decision about how much changes are required according to the customer needs, so that profit can be gain in the future [17].
- Legacy Business Models: A business relies on a product and principals that have allowed it to survive to the present. But sometimes, legacy can be more of a burden than an asset. It becomes threat to the population in many matters [17].

VI. CONCLUSION

Implementation of digital transformation is the key characteristic to become the part of the race of development at international level. Every digital transaction make possible through cloud computing. It reduces the problems that are faced in the manual transaction keep it error free and lower cost. Its user friendly nature increase the interaction between organizations and customers. It also contributes in the development of economic growth of the nation. Tremendous technologies of digital transactions are introduced day by day. Yet it has numerous challenges that need to be taken away. This paper describe challenges in digital transformation along with the already implementation in different areas.

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