

Emerging Technology in Business and Finance

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ABSTRACT

In the globalized scenario where technologies are developing continuously with time, these novel methods are affecting the business and finance in the significant way. In this chapter we are going to discuss about the major emerging technologies in the field of entrepreneurship, application development, finance, and business.

The authors are going to start with the introduction about the business, finance, entrepreneurship and application development, and the effect of the emerging technologies on these fields and the way in which technologies are developing from time to time, about adoption of these technologies by industries. The changes in the technologies with special reference to developed and developing country will also be the part of this chapter.

Moving ahead we are discussing about these technologies in prevailing businesses as well as upcoming business. Some of the technologies we are going to discuss are Embedded Business Intelligence, Amplified Visual Presentation, Augmented Analytics, Cloud Management.

Beside these technologies, we are going to cover about the growing automation in the finance sector such as Cloud banking, Robotic process automation, Blockchain, Internet of things, etc.

This chapter will cover all the technologies while getting the complete knowledge about what, why, where, when and how it is changing in the present finance and business scenario. Just like the two opposite faces of the coin, one side these emerging technologies are boon for the business and finances then on the other side there are certain risks involved in these technologies, which can be a great threat to our business as well as in our routine life. So, we also discuss about the potential risks associated with these technologies.

We will end our chapter by giving our conclusion, precautions, and suggestions on these technologies.

Keywords- Business Process, Finance, Automation, Digitalization, Emerging technologies, Technical Advancement.

I. INTRODUCTION

The continuous research and development in technologies, and the introduction of technology has reconstructed the ways of doing business and financial activities. Now, Corporate houses do not rely on conventional methods and technologies. The fast-moving technologies has revolutionized the way companies

operate and interact with customer. There is no skepticism that automation is the key of success for the modern business. From idea validation, finding name for our business, branding the business, or managing the business with help of advance technologies we can do it easily and in effective way.

These technologies include Generative Artificial Intelligence, Embedded business intelligence, Amplified

Visual Presentation, Augmented Analytics, Cloud Team Management, Artificial Intelligence.

When we talk about financial firms, the financial service firms adopted new technologies for better consumer interaction, increased efficiency, and improved customer experience. Innovating technologies in information technology has giving rise to digitalization and transformation of financial service through customer experience management. Innovative technologies like Blockchain have providing secure and transparent environment to do the transaction. Major technologies in the field of finance are Cloud banking, Robotic process automation, Blockchain, Internet of things, Autonomous finance.

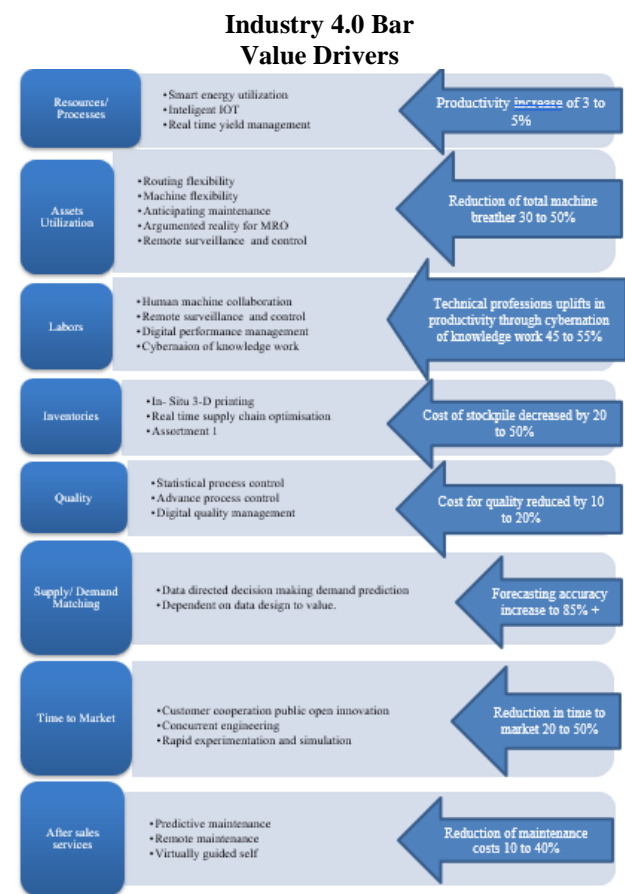
The history of industry has been since ages it started from 1800 at is has experienced three industrial revolution. Now we are in the fourth industrial revolution era. The automations in keeping the track and analysis of supply chain through smart technologies is the part of forth industrial revolution. This is powered by Industrial Internet of Things (IIOT) and self-governed system that uses algorithms based on electronic devices. The digital transformation interconnects with the back end systems like enterprise resource planning which make everything smart right from the manufacturing to the supply the chain followed by monitoring and controlling. In order to understand the innovative technologies, we need to know what are the business and financial processes.

1.1 Industry 4.0

The revolutionary ways to improve the distribution and manufacturing of the global business is defiantly through technologies. This is only possible by a set of system of business, operation and management process. Various resources and processes to improve the mechanism of industry 4.0 which is the base of global business environment, lies in the managing of the assets, improving the labor productivity, inventory optimization, improving quality, supply demand match, services and after sales and time to market. The technology and trends in market is directly related to the effective use of resources.

In the circle if value drivers, resource and processes helps in increase of production by 3 to 5% with Smart energy consumption, intelligent lots and real- time yield optimization. As the concept of societal market has increased in the present scenario it has a huge impact on services and aftersales services through forecasting followed by remote maintenance and virtually guided self- service. With this a significant reduction in the maintenance cost is seen by 10 to 40%. Customer concretion, concurrent engineering and rapid experimentation have significantly helped in reduction in time to market by 20 to 50% under time to market in value drivers in technology.30 to 50% reduction in breather time of machine is seen under asset utilization with Routing flexibility, machine flexibility, Remote surveillance and administer, digital performance management and programming of knowledge work, acts

in the forecasting and through this accuracy is increased by 85% to match the balance in supply and demand with data directed decision making demand prediction and dependent on data design to value. Statistical quality control, multi variable predictive control and cloud based digital quality management have helped to reduce the cost of quality by 10 to 20%. The cost of stockpile is decreased by 20 to 50% in situ 3-D printing, Real-time supply-chain optimization and assortment. A significant growth of 45 to 55% by technical professions uplifts in productivity through cybernation of knowledge work by human machine collaboration, remote surveillance and control, digital performance management and automation of knowledge work.



1.2 Business Process

A set of activities with specified organizational purposeful goal for a consistent outcome called as business process. Business management process (BMP) works on a systematic approach to manage the cost and also outsourcing business processes for the desired goals. The visibility and the mapping plays a vital role defined the set of business processes.

Business process is the systematic processing of important task performed by the personals in the organization in order to achieve the organizational goals that can be either product or service. There are number of interlinked processes involved in the day-to-day

functioning of the organization which should be done properly in order to achieve the desired output.

Business process is directly linked with the output of the organization so the organization should have clearly defined goals and objectives of the organization. This goal should be supported by various other processes like management process, organizational process and supporting process.

1.2.1 Management Process

Management process involves functions planning, organizing, leading, controlling, basically all the important functions that are necessary for the stability of the organization in the long run. These processes are the routine activities of the organization.

1.2.2 Operational Process

These are the group of activities that must be performed in the business in a commendable manner to maintain the company's competitiveness in the market by doing the value addition in both business and result. This process consists of activities like sales, marketing, customer support, operations etc.

1.2.3 Support Process

The main aim of this set of process is to aid the operational process and ensure the proper functioning of operational activities. These processes do the value addition in the internal activities.

Business Process Management (BPM) is the important tool to ensure the proper functioning of businesses. In simple world BPM deals with the productivity of the organization. Technical advancement is adding aspect in BPM like increased transparency, customer's orientation, and knowledge work. Artificial Intelligence is helping companies to validate their ideas more quickly than before, with Cloud team management companies can automate the process, enhance the security, assist in governance and compliance, performance monitoring and cost management. This is the only two of the many technologies that we are going to discuss.

1.3 Finance

Finance is significant to any business; it refers to the management of money. Although the process of finance management includes various activities such as forecasting, saving, lending, borrowing, and investing money. As finance is the ingredient of any business, it is nearly impossible to succeed without strong finances in place. User uses finance to purchase assets, goods, and raw materials, essentially anything that will give momentum to user business. That concludes finance and funds are the major part of an organization. If businesses' finances are mishandled or poorly managed then business might suffer heavy losses. That is why getting a grip on business finance is a top priority and its importance should never be underestimated. Business cannot function appropriately unless it has an adequate amount of money to run user business. Business finance can be used for numerous important purposes such as Strategic planning, financial management, Promotion, and so on.

There is no amazement that the pandemic has provoked business leaders to progressively migrate towards digital platforms, preferring online services over traditional ones as well as to make above activities more accurate, easy to perform and cost effective. This has motivated financial firms to make swift adoptions, incorporate cutting-edge technologies into their services, and improve customer service constantly. Technologies continue to contribute to the progress of the finance sector. There are various new technologies which are reshaping the financial world such as security of our data in modern digital world is a great cause of concern everywhere especially in finance sector due to increased data breaching incidents at meta and other platform so Advance Cyber security and Blockchain is crucial for transparency and security of user's data. Cloud based Banking architecture eased the banking process more convenient and accurate. It is the ideal solution for smooth functioning of global payments, Peer to Peer (P2P) transfers, and contactless Payments. Neo Bank or Neo Banking is the new change in the banking industry which broke the monopoly of large banks by making banking convenient and accessible of all. Because in this type of Banking infrastructure cost is less because most of the banking activities done online and physical branches play a minor role in it.

II. ADAPTATION OF EMERGING TECHNOLOGIES IN BUSINESS

The mounting rate at which Technological advancement and automation is going in society and in business environment it is just like a huge tidal wave of progress. If anyone can imagine the world 10 years back in time, they may observe that.

- There was no such Internet of Things (INTERNET OF THINGS) or voice enabled searching devices where people can search for product and information.
- There was lack of centralized channel where all personal can work with efficiency irrespective of their location.
- There are no existing of new type of marketing platform and strategy like Instagram and short videos.

So, maintain the same pace with the innovative technologies' companies is adapting this new expertise to enhance their existing working environment. This is about the full potential adaptation of technology to increase the efficiency of business in all aspects.

Different companies treat the same innovation in completely different way. One company can enthusiastically embrace the technology another might not find it significant enough for adaptation.

2.1 Importance of adaptation of new technologies

Maintaining the pace with the latest automation and technical innovation it can play the key role in the success of the business. The right technological adoptions

can increase the flexibility, streamline operations, and help the organization to cope up with continuously changing market place. In the competitive business environment company had to remain on top of the adaptation of ever-changing technologies world. Other prominent features of adaptation of technologies are.

- Increased efficiency
- Competitive edge
- Remote work Challenge
- Robust workflows
- Position for the future growth

2.2 Present Scenario of Technological Adaptation

In upcoming times, we can expect that some more new technology can hit the market more prominently like Metaverse, Augmented reality and many more. Graph is the comparative analysis of various factors due to which company is going to adapt new technology.

2.3 Why do company invest in new technologies

Here are some of the key reasons why companies are investing in new technologies.

- To replace EOL Hardware
- To refresh cycle
- To reinforce business growth
- To support end user need
- To meet project requirement
- To leverage new tech features.

2.4 Top technologies on adaptation list by business

- Artificial Intelligence
- Internet of things
- **Robotic Process Automation**
- **Cloud Native development**
- **API brokerage**
- **Block chain**
- **Serverless Computing**

III. MAJOR EMERGING TECHNOLOGY IN THE FIELD OF BUSINESS

3.1 Embedded Business Intelligence and Application

In the present world of digitalization every company is a data company, and their ability to store that data and analyze them can differentiate the industry leader from rest of others. Companies want actionable insights after analyzing of those data.

Business Intelligence (BI) is the technical and procedural infrastructure used for the collection, storing and analysis of data originated from the business activities. It is the wide collection of activities like data mining, process analyzing, benchmarking and descriptive analytics. BI analyzes all the data and present reports which help the management to take better decision.

Traditionally, Business Intelligence work as an autonomous application where user must switch from their business application to separate BI tools for analyzing the data. This decreases the work efficiency and makes it difficult of user adaptation. Now the thing has changed with the introduction to implanted intellectual occupation denoted by EBI (Embedded Business Intelligence).

Embedded Business Intelligence or Embedded

BI is the combination of self-service BI tools and business applications. It supports real-time Analytics, interactive reporting and visualization which causes the enhanced user experience. Embedded BI also extends its functionality to smartphones to guarantee that a scattered workforce can have access to the same BI for collaborative projects in real time.

Unlike traditional BI which works on narrow defined set of data variables from a single source, it allows the user to do the significant customization that allow to combine data from multiple data source to full fill their need.

Now business user uses BI tools as part of their decision-making process because they can do assigned task more efficiently, accurately in less amount of time. When user move on to advance level, it can be a part of Workflow automation, as certain task will automatically be triggered based on parameter set by decision maker.

3.1.1 Application of Embedded BI

Embedded BI can be helpful for businesses in many ways, here are few of them.

Embedded BI in Human Resource

HR department deal with the some of the key roles of business like hiring, training organizing corporate event. HR role is multifaceted which require unique solutions.

By integrating Business Intelligence with HR technique can enable:

- Reliable body of workers making plans and expertise control with the aid of using combining modern worker records with turnover costs to set up effective, green, and well-timed expertise acquisition strategies and mastering and improvement programs.
- Using strategic alignment, one may make sure that all business endeavors and departmental goals are in line with those of the corporation.
- the analysis and comparison of the effectiveness of recruiting methods with employee characteristics, skill sets, and factors contributing to employee voluntary departure in order to maximize employee recruitment and retention goals.
- Measurement and benchmarking of workforce performance to pinpoint areas, roles, or people in need of development.

Embedded BI in Logistic and Supply chain Management

Currently Logistics and supply chain Management Company uses Global Positioning System

(GPS) to track the vessels or vehicles during the transportation of stocks. Embedded Analytics combines the location-based data with other relevant data to enhance the efficiencies of operation.

Adding embedded BI capacity helps in

- Understanding and leveraging the customer profitability.
- Providing better customer service.
- Increasing capacity planning, human resource allocation, and supply chain prominence.
- Analyzing the driver and carrier performance fairly and effectively.

Embedded BI in Sales and Services.

Embedded analytics allows staff to see how the consumer they are now speaking to buys and uses products and services, which helps them spot the best cross- or up-sell chances.

3.2 Augmented Analytics

As we discussed the importance of data in modern economy, the amount of data is so huge that it is difficult for Human being to analyze and interpret it. Here Augmented Analytics plays a major role.

Augmented Analytics is the branch of data analysis which “Augment” the data with the help of combination of technologies like Artificial Intelligence (AI), Machine Learning (ML) and natural language processing (NLP). Machine Learning brings the Automation in the complex Analytical process like data preparation, analyzing of data and generating the meaningful insight from it. NLP make interaction with these data easy. User can easily ask question in their natural language and get required answer for it.

Businesses which use augmented analytics get phenomenal value from it, as this technology help them to get their valuable data much faster without the need of deep technical knowledge and expertise in dealing with big data. It helps the business user to get relevant data much easily, by asking the best possible question, and immediately finding the insights related to their business.

3.2.1 Importance of Augmented Analytics Prospecting the opportunity of Big Data

Businesses can take some crucial decision such as what to produce when, from whom to produce, and how to market and many more after analyzing the set of data but in present scenario due to huge volume of data companies find it difficult to interpret them without any biasness, if there is a requirement of immediate answer then it completely impossible.

Technologies like Artificial intelligence and machine learning are needed to discover the insight from big data. That is why augmented analytics is important because they combine the data analysis and artificial intelligence to analyze the huge volume of data.

Reducing the dependency on Data Scientist

Data analytics process consists of time-consuming and complicated steps that can only be

performed by data scientist. The process of hiring these data scientist is too expensive due to shortage of data professional worldwide.

Augmented Analytic cannot replace these professional but reduce the dependency on them by automating some of the processes like data collection, preparation, cleansing and analysis. It also helps to save the time of data scientist for other important activities like interpreting results. Augmented Analytics improve the values of these analyst bring to the company.

Make data analysis much easier for untrained persons.

It is also one of the important features of Augmented Analytics is that untrained professionals can also use this tool efficiently. Because augmented analytics automates all complex analytics process and allowing user to find data by simply asking some questions, professional without prior training in data science skill can leverage advance analytics. ML guides the user by suggesting what to ask, answer to these questions is come in the form of data visuals like graphs, chart, and map so the user do not have to prepare these visuals, and can be investigated by simple command.

Natural Language Interaction

Natural Language processing in augmented analytics enables user to use the plain language to type the question to query the desired data instead of using a data query code. This system gives user a guided experience. First it translates the user’s text into a query and makes suggestion to uses to fill the gaps to understand the intent and context of user’s question. This helps the users to get the detailed insight of their data without having proper understanding data model.

It also generates the textual descriptions of insights from the data, which can also have the explanation of visual data. This helps the user to understand the insights properly without any deep expertise of interpreting visualizations.

3.2.2 Benefits and uses of augmented analytics in Business

Some of the benefits of augmented analytics include Agility, Accuracy, Efficiency and Confidence. The uses of Augmented Analytics in business are related to finance, account receivable, sales, marketing, manufacturing, human resource, etc.

3.2.3 Use of Augmented Analytics in Business Finance

A financial analyst can easily forecast and control the expenses across different line of business with the help of augmented analytics.

Account receivable

Financial managers can use the ML for the prediction of future cash flow in the business or to predict late payments, or to make right strategy for recover of debt.

Sales and Marketing

Sales and Marketing teams can be entitled with the better customer lead – and quick identification of cross and up-sell opportunities.

Manufacturing

Manufacturer can use augmented analytics to predict the future demand of product and strategies the spending through different department.

Human Resource

Human Resource Manager can predict employee performance, analyze their perform and take corrective measures.

3.3 Cloud Management

Cloud management refers to the process of controlling and maintaining the public, private, hybrid (both public and private) or multi cloud environments. It consists of processes, strategies, policies, and technology for management of cloud computing technologies that operate in the cloud.

Cloud Management is very efficient and effective for IT firm to get complete control over expandable and dynamic cloud computing environment. It combines different types of technologies to deliver a cohesive and consistent strategic process. Management can coordinate delivery and management of cloud computing infrastructure, application, data, and access control. Business houses are increasingly deploying it enterprise software and tools to the cloud to reduce the upfront investment as compared to on installing on-site infrastructure. With the help of cloud management, administrators can track the wide variety of cloud activities ranging from application deployment and its utilization, managing the lifecycle of the resources, data integration and risk management.

3.3.1 How cloud management work

Companies generally installed cloud management system on the target cloud infrastructure. After installation management system monitor and record the activity and performance then send the analysis to the web-based management dashboard where user can see and act accordingly. If any issue is arisen, then administrators can give command to the cloud with the help of cloud management platform, which work as a combined point of control.

3.3.2 Benefits of Cloud Management

Here are some of the common cloud management benefits.

Prevalent Automation

Managing the different application is a repetitive and complex task, especially if the cloud environment is huge and complex. It enables the program for the management of resources, providing automating capacity management, continuous integration and managing to reduce burden.

Capacity Management

Procurement of intangible virtual infrastructure is much easy as compare to tangible assets. So, there is always a risk for an organization can lose track of the requirement of those technologies and availability of those services.

Cloud management's granular reporting and detailed analytics, help the organization to do better

forecast and plan their requirement while improving resource acquisition, utilization, and work load placement.

Compliance and Governance

Transforming into the cloud-based infrastructure relinquish a certain amount of control over a physical infrastructure and applications, but company still need to track over access to maintain the compliance. Cloud management ensure the users to configure align with regulator's policies by alerting them.

Monitoring and Logging

It enables observability with logging and monitoring of every event that occur in the business. It helps to inspect and understand what is going in the business environments. It enables to collect, analyze, and correlate log files which help to identify error and automate the risk management and optimize performance.

Performance and Cost reporting

Cloud computing costs can easily exceed the organizations budget if the cost is not closely monitored from the start. It provides capacity for cost management, forecasting and reporting to help the managers to imagine an accurate figure of what and when resources are being used. It allows effective allocation of resources, understanding the flow of money in the resources and eliminates unnecessary costs.

Security

Machine-learning capabilities with cloud management tool provide robust threat intelligence and detection and helps in streamline security monitoring processes.

3.4 Artificial Intelligence

AI is the imitation of human rational function especially by electronic devices it is governed by systems and managed by the team of experts who work on NLP (natural language processing), recognition of speech, and electronic devices with the vision specifically using AI.

Learning Processes

In learning process of AI programming is attentive by data collection and the development of structure that convert the data in to authentic knowledge. The rules or structure, also known as algorithms, deliver explicit commands to computer equipment to do a particular function.

Reasoning Processes

In reasoning branch of AI software design is focused by determining the optimum algorithm to fulfil a certain goal.

Self-correction Processes

In self-correction AI software design capability has always been focusing on continually enhance algorithms and ensure they provide the most exact results.

3.4.1 Current scenario of artificial intelligence in businesses.

Organizations may employ AI in a variety of ways, but the bulk of applications focus on boosting growth. AI and machine learning are being used by businesses in creative ways to boost corporate

performance. AI has the following business benefits:

- Enhance competence through process mechanization
- Steadfast by increased speed in service
- Using consumer insights to make decisions
- finding new product and service opportunities

3.4.2 Application of Artificial Intelligence in businesses.

Some of the most frequent uses of AI include machine learning, cyber security, customer relationship management, internet searches, and personal assistants.

Machine learning

Machine learning is widely used in systems that collect massive amounts of data. Smart energy management systems, for example, collect data from sensors linked to various assets. Machine learning algorithms contextualize huge volumes of data before presenting it to users, company's decision-makers, allowing them to better understand energy use and maintenance needs.

Cyber Security

Even when it comes to identifying vulnerabilities in computer network defenses, artificial intelligence is a valuable ally. AI systems may identify cyberattacks and other cyberthreats by detecting trends in data intake. When a threat is found, it may search user data to find the source and help avoid future threats. Because they are as alert and consistent as AI, the additional pair of eyes will be very beneficial in managing user infrastructure.

Customer Relationship Management

Artificial intelligence is also influencing customer relationship management (CRM) systems. Zoho and Sales force require a lot of human input to be accurate and up to date. When artificial intelligence (AI) is added to these platforms, a normal CRM system transforms into an auto- updating, self-correcting system that handles user connections for you.

Internet and data research

Artificial intelligence analyses huge amounts of data in order to identify trends in users' search behaviors and present them with more relevant information about their condition. As users use their devices more frequently and AI technology develops, they will enjoy a more personalized experience. This has significant consequences for user small businesses since it will make it easier for you to target a very specialized market.

IV. MAJOR EMERGING TECHNOLOGY IN FINANCE

4.1 Robotics process automation (RPA)

The term "automation" is one of the most extensively used term in current world. It is not only a widely used term but also enhance mechanism is a core part of nearly every sector today. In essence, the adoption

of computerization technologies has propelled development to entirely new heights. Robotic Process Automation or RPA is one such contribution to the fast-growing automation industry. Robotic Process Automation is a form of business process automation technology based on allegorical software robot or on artificial intelligence (AI) digital workers. It is mainly the use of software with Artificial Intelligence (AI) and machine learning (ML) capabilities to knob high-volume, repeatable tasks that previously required humans to perform. Lecturing inquiries, performing calculations, keeping records, and carrying out connections are a few of these duties. When user overhear the term automation, they might think of a robot performing task without any human interference. And yes, they are somewhat correct. Though, user could have a few fallacies, such as:

- RPA is not a humanoid robot and does not exist physically.
- RPA bots cannot completely swap humans.
- RPA bots do not possess logical thinking or decision-making skills, which is why they cannot imitate human intellectual functions.

RPA Features

- Rich Analytical Speed
- Creation of bots
- Security
- Debugging
- Script Less Automation

Benefits of RPA

- Improved Customer Satisfaction
- Increase Speed
- Improve Quality and Scalability
- Reduced Cost and Operational Risk
- Accuracy and Consistency

Types of RPA:

- **Unattended/Autonomous RPA:** This type of RPA is Idyllic for reducing work like completing data processing tasks in the background. They do not require any human intrusion. It combines AI, machine learning, cognitive automation, computer vision, and other technologies.
- **Attended RPA:** Attended automation allows user to focus on more high-value work within user organization. This can be done by automating repetitive, manual, front-office activities and imitates actions perform on user desktop or browser, like mouse clicks, by recording and playing back these actions in real time.
- **Hybrid RPA:** This is a combination of attended and unattended RPA. These bots address front- and back-office tasks in the enterprise.

Use of RPA:

- Banking and finance
- Human resource
- Marketing and sales
- Insurance agencies
- Customer relation management
- IT integration process

4.2 Blockchain

Blockchain first appeared in the year 2008 by ‘Satoshi Nakamoto’.

Blockchain can be describe as the collection of records called blocks, linked with each other, strongly resistant to alteration and protected using cryptographic hashes as a unique Id’s. Blockchain is decentralized data ledger that is securely exchanged. It allows a restricted number of people to share data. The Blockchain provides remarkable advancements in security, decentralization, transparency, and unaltered data. This makes it the ideal tool for upcoming apps. There are numerous benefits of using Blockchain technology such as transparency, lower transaction cost, faster transaction etc.

Types of Blockchain:

There are four types of Blockchain such as:

- Public Blockchain
- Private Blockchain
- Hybrid Blockchain
- Consortium Blockchain

Public Blockchain: Public Blockchain is completely open to everyone and anybody can join the system. Every authorized member has a copy of digital ledger. As a result, Data is entirely open and transparent. It is decentralized and secured hence; Data cannot be altered or manipulated once it is placed on the block. Public Blockchain are also known as permission less Blockchain. It is trustable and secure. It can be used for voting and fundraising.

Private Blockchain: Private Blockchain is a network that operates in a restricted context as a closed network or is managed by sole entity. This network is considerably small and often run on small network within a firm. It is faster, as transaction per second (TPS) is higher. It is used to managed supply chain management, asset ownership, internal voting etc.

Hybrid Blockchain: When organization that desire best of both private and public will sometimes employ a hybrid Blockchain. This type of Blockchain includes the characteristics of both private and public Blockchain systems. It allows business to create a private permission-based system. It is secure and cost effective. It is used by real estate, retail, highly regulated market like banking etc.

Consortium Blockchain: Consortium Blockchain is also known as federated Blockchain. It is like hybrid Blockchain system. It is more secure as compare to public Blockchain. It is used by banking & payments, research,

and food tracking firms like Swiggy, Zomato etc.

Blockchain technology is currently used by Axis Bank, ICICI Bank etc.

4.3 Autonomous finance

Autonomous technology is type of technology that can be function without human involvement under different types of circumstances. Artificial intelligence continuously learns from them environment to make better decisions, just like humans learn and grow. Artificial intelligence (AI) is a best example of autonomous technology. Advanced versions of AI can perform decision making function and acting on their own without human interference. Self-driving cars, functional robots, humanoids, chatbots, and drones are some examples of autonomous technology. As AI is continue to revolution every industry and business, corporate finance teams cannot afford to stay behind. Autonomous finance and accounting capabilities can change the way you prepare annual reports, close books, and collect outstanding invoices. Autonomous finance can be defined as the ability to perform day-to-day financial functions with minimal human intervention. Autonomous finance is underpinned by technologies such as the cloud, robotic process automation (RPA), advanced analytics, natural language processing (NLP), and AI. Autonomous finance offers various advantages to companies such as:

- **Time saver:** labor-intensive tasks such as payment aggregation and reconciliation are time-consuming. It can save user employees time and effort by automating such unneeded tasks.
- **Reduces human mistake:** Performing financial and accounting functions manually often causes to human error. With the help of **finance automation tools**, you can reduce human intervention and the possibility of such errors.
- **Improves consistency: Automating financial processes** based on industry-specific best practices. Each employee has their way of working, and standardization may cause inconsistencies in collecting data or sharing information.
- **Data security.** Storing sensitive financial data in spreadsheets and other formats often leads to data misplacement. This often results in **data breaches** that can prove disastrous for an organization. An ideal automation solution can restrict data access to only authorized users
- **Intelligent analytics.** Autonomous finance solutions provide robust analytics and reporting capabilities for greater insight into an organization's finance functions. This improves decision-making and risk assessment.
- **Scalability.** Automation solutions enable companies to scale without additional employees and keep up with their growth. This, in turn, reduces overhead and increases working capital.
- **Optimized resource utilization.** You can free up user employees' time to focus more on value-adding tasks. This also allows finance leaders to focus on pressing business challenges.

4.4 Internet of Things (IOT)

The Internet of Things describes the network of physical objects “things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. Internet of Things application use machine learning algorithms to analyze the massive amounts of data in the cloud. Machine learning-based algorithms can identify equipment irregularities and send alerts to users. Cloud-based Internet of Things applications in business can help the users to rapidly enhance existing processes for supply chains, customer service, human resources, and financial services. There is no need to recreate complete business processes.

One example of this is the use of Internet of Things to increase efficiency and safety in connected logistics for fleet management. Companies can use Internet of Things fleet monitoring to direct trucks, in real time, to improve efficiency. Internet of Things has been influencing the financial sector in various ways

- Internet of Things enables financial organizations to provide better services to their customers as it helps in analyzing their critical data to make them understand customers’ needs and suggest customized products as per their preferences.
- Banks and financial institutions take the help of an Internet of Things development company to reduce risks, block hacked accounts and analyze suspicious user data.
- Banking transactions have also become shades more convenient with superlative contactless payment services.
- Internet of Things provides real-time data that banks can use to update customers about offers that best suit their needs and speed up their decision-making.

Application of Internet of Things in financial service industry:

1. Internet of Things can Improved data security and fraud recognition
2. Internet of Things can help personalize the customer’s experience.
3. Banks can better control their customers' assets and monitor them remotely using Internet of Things technology
4. Firms can benefit from the real-time data visibility offered by Internet of Things-powered systems.
5. Internet of Things has the potential to transform traditional banking by allowing users to access their funds from anywhere at any time. Wearables-Internet of Things integration uses advanced technology to provide offer convenient payment functionality.
6. It ensures the assets at a branch are used optimally to improve its efficiency and reduce operational overheads.
7. It also helpful for security purposes and builds customer trust.

Organizations in the banking and financial services industry, has improved their operations due to move to open banking, faster payments, and more

responsive mobile services are some of the recent developments due to advancing technologies. Here are some examples of Internet of Things:

- Smart ATM,
- Contact less payment,
- Smart Contracts

V. RISK ASSOCIATED WITH EMERGING TECHNOLOGIES

The corporate environment is rapidly changing, providing new challenges for organizations to address. Companies must deal with shifting stakeholder expectations, unstable economic conditions, stricter rules, and a variety of other unanticipated occurrences, such as a global epidemic.

To remain competitive, many firms are turning to developing technologies. According to ISACA's "The Pulse: Emerging Technology 2021" study found that emerging technologies can disrupt incumbents by solving current challenges and problems. However, the benefits of emerging technologies must be carefully balanced against their disadvantages.

Businesses must consider the risks and benefits of adopting new technologies simultaneously. In order to get a better understanding of how people view the technology, respondents to the ISACA survey were asked to discuss the risks associated with its use. The majority (30%) and majority (33%), respectively, rated the risks associated with AI as low or medium, while only 9% of respondents deemed AI to be high risk. Businesses must consider the maturity and complexity of AI-enabled business processes in order to determine the true risk to the company.

VI. CONCLUSION

There is a possibility that these new technologies will not meet the expectations of businesses. To combat this risk, a clear vision must be established, supported by clearly defined goals with attainable targets. Due diligence involves extensive research to identify the requirements for new projects that have a significant impact on the business. IT governance ought to play a significant role in the business's integration of new technologies. IT groups like application development, infrastructure, and security ought to be represented during the governance process. The project's execution will be streamlined, additional requirements will be helped to be determined, and communication with various parts of the company will be easier as a result of this. Monitoring and regular status updates should be provided to senior leadership throughout the project and after the launch to determine whether ROI was achieved or miscalculated.

There are also risks associated with changing regulations, which may limit an emerging technology's

success. Privacy laws pertaining to the collection of consumer data may hinder a business's ability to successfully utilize certain emerging technologies by disrupting the production of existing goods and services. Soon will be new laws, particularly on algorithmic bias in technologies that affect customers. Through agile development processes and continuous monitoring of new regulations, models must be able to adapt to changing and new regulations.

Finally, there is a chance that an issue with the technology could cause an error in the algorithm. This would affect the quality of the data and put the data's security in jeopardy. These dangers can be reduced using efficient procedures for change management. Changes to models and source code repositories are appropriately logged by version controls, peer reviews for coding and model changes are carried out, and these procedures effectively design and execute test cases. Additionally, in order to spot potential biases and ethical quandaries, it is essential to pay attention to the data set during the planning and building phases.

Emerging technologies may offer advantages over rivals, but they naturally come with risks. Process owners can take a proactive approach to identifying risks by collaborating with internal audit or enterprise risk management. Early discussions about risks and controls will help identify any unresolved issues and process enhancements and ensure that emerging technologies are successfully integrated into the business.

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