A Review on Crypto Currency with Distributed Ledger Technology for Blockchain Technology

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Abstract: This paper conducted a detailed examination of blockchain-based technology across a wide range of fields. The objective is to discover the current state of blockchain technology and its applications, as well as how certain facets of this innovative technology can change conventional business practises. Multiple academic papers published in high-ranking scientific journals have theoretical background. As a way of streamlining our assessment and documenting the constantly evolving blockchain domain, this study includes publications from the last decade as well as several reports from the literature. Based on a detailed, systematic review and thematic content analysis of the discovered literature, we present a comprehensive classification of blockchain allowed applications across various industries. We also address the exposure found in the related literature, specifically the limitations of blockchain technology and how these limitations manifest themselves across various sectors and industries. We recognize numerous research gaps and potential exploratory directions based on these results, which are expected to be of great benefit to both academics and practitioners. The race toward trustworthy distributed networks has generated a lot of interest recently, thanks to developments in cryptocurrency platforms like Bitcoin. Multiple Distributed Ledger Technologies (DLTs) are fighting right now to show off their skills and how they might overcome the shortcomings of others. Both distributed ledger systems rely on a distributed, open peer-to-peer network and a set of modular frameworks, such as cryptographic hashes and consensus mechanisms. As a common denominator, all distributed ledger systems depend on a shared, distributed peer-to-peer network and a set of modular structures such as cryptographic hashes and consensus mechanisms. However, their implementations vary greatly in terms of data structure, error tolerance, and consensus approaches. In terms of cost, protection, latency, and efficiency, this divergence affects the design of each DLT case. We present four current DLT implementations in this paper. Each technology's characteristics are discussed, as well as a preliminary comparison.

Keywords: Blockchain, Digital Ledgers, Crypto Currency, Distributed Ledger Technology (DLT), Internet of Things; IoT, Hashgraph.

1. Introduction

Blockchain technology is a new technique with potential applications for industries, allowing for secure transactions without the need for a centralized authority. Since Bitcoin's use of blockchain technology in 2009, there has been an increase in the number of blockchain technology-based technologies.

The first implementations were electronic cash structures that distributed a global ledger that contained all payments. These payments are encrypted with cryptographic hashes and verified and checked with asymmetric-key pairs. The payment history records a chain of events in such a manner that any try to revise or alter a previous payment necessitates a recalculation of all subsequent blocks of transactions.

Although blockchain technology is now in the initial stages, it is based on well-known and secure cryptographic principles. There can be currently a lot of buzz surrounding the technique, and many potential applications for it. Moving forward, the hype is going to fade, and blockchain technology will become another technique to be used.

1.1 Blocks :

Users of the blockchain network send applicant payments to the network using software (desktop applications, smartphone applications, digital wallets, web services, etc.). Such payments are sent to a node or nodes within the blockchain network by the software. Non-publication complete nodes and also some publishing nodes can be chosen. The uploaded payments are then generated to the rest of the network's nodes, but this does not guarantee that the payment will be included in the blockchain. Once an outstanding payment has been released to nodes, it must wait in a queue until it is implemented by a publishing node in many blockchain implementations.

When a publishing node publishes a block, payments are added to the blockchain. A block is made up of two parts: a block header and block data. This block's metadata is contained in the block header. A collection of authenticated and authentic payments that have been uploaded to the blockchain network is contained in the block data. Legitimacy and authenticity are guaranteed by ensuring that the payment is properly designed and that the suppliers of online services in each payment (listed in the transaction's "input" values) have each crypto graphically authenticated it. This confirms that the suppliers of online services for payment had access to

passwords capable of signing over the valid online services. The legality and authenticity of all payments in a released block will be checked by other full nodes, and a block will not be accepted if it contains illegal payments.

1.2 Block chain Technology :

Blockchains enable us to have a decentralized peer-to-peer network in which non-trusting people can communicate with each other in a verifiable manner with no need for a centralized intermediary. To accomplish this, consider a blockchain as a collection of interconnected processes that provide unique features to the network. The signed payments between peers are at the most basic level of this technology. Recognizing the value of an agreement between two parties may facilitate the transfer of online or in-person assets, the execution of a task, or other similar activities. This transaction was signed by at least one person and forwarded to its neighbors. A node is usually any company that communicates to the blockchain. Full nodes, on the other hand, validate all of the blockchain guidelines. Such nodes combine payments as blocks and are responsible for deciding which payments are legitimate and must be kept in the blockchain and what is not.

1.3 Ledger :

An accounting cycle is a corporation's economic transaction history system, with debit and credit funds transfer verified by a trial balance. The accounting cycle keeps track of every financial transaction that occurs during the life of an operating company.

General ledgers are categorized based on their purpose. This identification makes it easier to prepare financial statements. The categorization is as follows:

- Payroll Ledgers: All costs will be recorded in this ledger. The group includes Purchase Accounts, Rent Accounts, Electricity Accounts, Maintenance Accounts, and other similar accounts.
- Revenue ledgers: Every account will contain all accumulated income. This category includes accounts for sales, interest received, and discounts received.
- Capital ledger: Each transaction will contain all accounts relating to capital introduced/drawings.
- Asset ledger: All asset-related accounts will be recorded in this ledger.This category includes cash, bank accounts, debtors, machinery, and furniture accounts, among other things.
- Liability ledger: All statements relating to the organization's debts and liabilities will be presented there. Borrowings, creditors, accounts payable, and so on would be included.

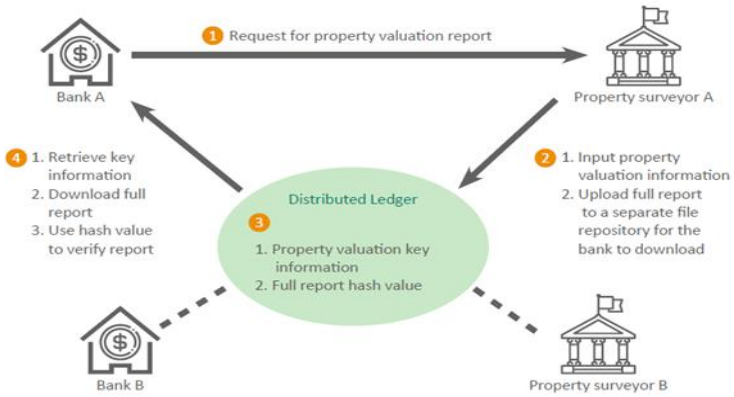
1.4 Distributed Ledger Technology:

DLT is a cutting-edge technique that enables many advantages, including transparency, resiliency, auditability, and cryptography-enabled security. This is a thriving innovation with a thriving R&D community and a growing variety of applications.

The article describes an in-depth examination of DLT, focusing on its key advantages, risks, and potential uses. It addresses issues of data encryption and data security. It also shows how DLT can enable viable, valued FinTech applications, based on the preliminary results of three solid evidence exercises – mortgage loan application, trade finance, and digital identity management.

The article enhanced by important contributions from professional banking experts as well as few other DLT-focused organizations.

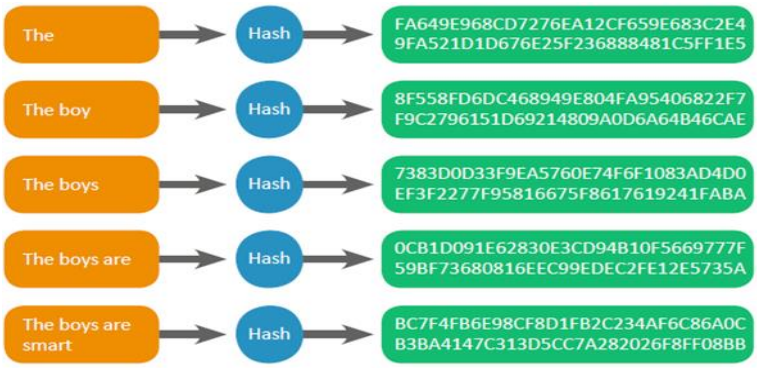
Fig 1 : Distributed Ledger Technology



Concrete evidence: A DLT enabled asset evaluation in which the DLT system functions as a protected ledger shared by different banks and quantity surveyors.

1.5 Hash Function:

Demonstration of a Hash operation that translates data of any size to fixed-size unique values, irrespective of how significant the data differs from one another. The sale of Alice's property to Bob is safely recorded in various banks and at the Land Title.



Our research contributed to a comprehensive understanding of blockchain features and offers a glimpse of existing public blockchains across industries. Based on a learning approach, we emphasize the intellectual community's increasing interest and recognize three key streams of research:

(i) categorization of blockchain-based technology across different sectors.

(ii) the suitability of blockchain technology to generate value in these sectors in light of the different constraints that this technology presents, and (iii) guiding researchers by providing a roadmap of promising research avenues, challenges, and opportunities that require additional study. It is important to note that this review is by no means exhaustive, as blockchain technology is constantly evolving at a breakneck pace.

(iv) A comparison of the characteristics and prerequisites of blockchain versus traditional databases.

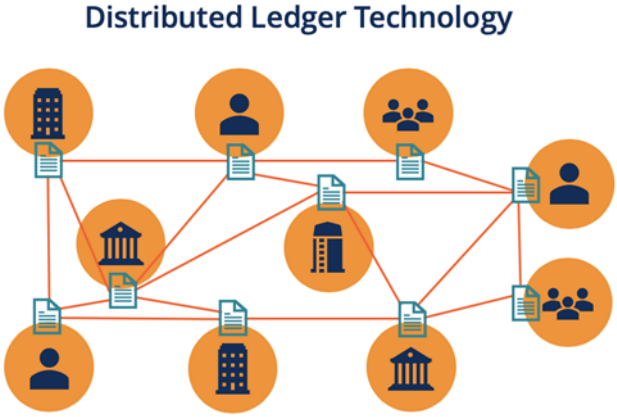
(v) Significant DLT Developments in India.

2. Literature Survey :

Since blockchain applications eliminate the need for a centralized authority or intermediary, they have the potential to accelerate payments. Furthermore, distributed ledgers have the potential to minimize transaction costs.

Experts also believe that blockchain technology is much more secured since each node of the network holds records, resulting in a system that is harder to handle or effectively attack.

Many people believe that a digital currency is a much more effective way to handle records because the data is released and thus witnessed across a network, making a successful cyberattack much more unlikely.



Users should use digital currency technology to record, share, and integrate records in a distributed network with many users. It can also be viewed as a set of innovations with similar structures that can be implemented in a variety of ways with separate regulations.

Based on whether the ledgers are accessible to everyone or by the devices, digital currency technology can be categorized as public or private (also called nodes). It can also be classified as permission or permission less, depending on whether participants need permission from a specific entity to make changes to the ledgers.

2.1. Distributed ledger benefits

The implementation of blockchain technology in money transfers sparked a lot of early interest. That is understandable considering that cryptocurrency bitcoin has achieved widespread adoption while still demonstrating that DLT can work. Banks and other financial institutions were also early adopters in this space.

Additionally, proponents of DLT argue that digital ledgers can be used in a variety of settings, including government and business dealings, in addition to financial transactions. Digital ledgers, according to experts, could be used in tax collection, property deed transfers, social benefits distribution, and even voting processes.They also claim that DLT can be used to process and execute legal documents as well as other similar transactions.

Some believe that people should use this technology to store and better control private information, then selectively share portions of those records as needed; use cases include personal medical records and corporation supply chains.

Proponents also claim that digital ledgers can help better track property rights and ownership for art, goods, music, film, and other media.

2.2. The future of distributed ledger technology

It is unclear whether digital ledger technologies, such as blockchain, can transform how governments, organizations, and businesses operate. Articles in the academic and financial press have discussed whether distributed ledger systems, as they currently exist, are credible enough to be used on a large scale. The lack of rules for this new form of exchange, as well as security concerns, are issues.

2.3. Distributed Ledger Technology and Blockchain Technology

The terms blockchain and distributed ledger technology are commonly used interchangeably. However, they are not the same. Blockchain applications make use of a variety of technologies, one of which is distributed ledger technology.

Blockchain is a type of digital currency that employs cryptography to make it difficult to handle. It is an immutable and distributed ledger used for recording transactions, transferring ownership, and monitoring assets. Blockchain provides security, transparency, and trust in a variety of digital asset transactions.

Because as the name implies, data in blockchain technology is packaged and stored in bundles known as blocks, and the blocks are chained together. The blocks in the chain cannot be edited because blockchain technology only allows for the addition of new blocks of data.

Additionally, blockchains are typically public, which means that everyone can view transaction histories. Anyone can become a node and join in the operations of a blockchain. As a result, blockchain is permissionless.

Mostly on the opposite, not all decentralized ledger systems rely on blockchains. They do, however, continue to use cryptographic validation. Digital currency generates a decentralized ledger to gain consensus from participants who mistrust each other. As a result, new information is only included when all participants agree to the act.

Unlike blockchain, digital currency typically places restrictions on its use, access, and who can be a node. It also employs a cryptographic signature to periodically timestamp new entries.

The public and private features of distributed ledger technology are both available. It can also be both permissioned and trustless.

2.4. Blockchain in crypto currency

This technology is well-known, and it is expanding on a daily basis. There are several Cryptocurrencies in the world, but the most well-known are Bitcoin and Ethereum [3]. It also functioned as a conventional currency, allowing users to easily purchase goods and services [4]. People are beginning to trade in cryptocurrency and save their assets using this technology [5].Cryptocurrency is regarded as a well-established industry[6].

Cryptocurrency is a method of exchange process that is constructed and stored in a chain economically. These payments are properly secured because this technique enables encryption and decryption techniques to inspect financial units and safely record all payments [6]. This technology is not objectively considered; rather, it is only visible through a network chain. This cryptocurrency is not controlled or controlled by any bank, but rather by the blockchain network, which is highly decentralized.

Only when payment is performed in the chain, the payment must be verified to other blocks whether it is legitimate or not, then after a new block is established in the chain and transaction history is maintained in a new block, when any development of a new block is done for a unique identifier, the hash of a block is created via confirmation. Similarly, it is legal in some Asian and European countries but is mostly prohibited by the government in many countries due to state problems.

There are numerous advantages to using cryptocurrency. It increases awareness of every transaction that is permanently documented, as anyone can view and observe it due to public access [6]. Because of the proper block hash and prior hash, no one can simply send his transaction, which is also known as a forward payment. In this innovation, a permanent ledger is used to keep a record of all transactions [4]. Direct trading reduces transaction costs by saving both time and money. The settlement was quicker and less costly, saving a significant amount of money. Polling can also be done using this technology via smartphones and tablets, with accurate and instant results.

2.5. Hash Functions:

Cryptographic Hash Functions are a type of hash function that is used to store the use of cryptographic algorithms for many operations is an important element of digital currencies. Hashing is a way of adding a cryptographic hash function to data, which produces a fairly unique output (known as a message digest, or simply digest) for inputs of nearly any size (e.g., a file, text, or image). It enables individuals to independently take data input, hash that data, and derive the same result demonstrating that the data has not changed. Even minor changes to the input (such as changing a single bit) result in a completely different outgoing tract.

The Secure Hash Algorithm (SHA), which has an output size of 256 bits, is a special cryptographic hash function used in many blockchain implementations (SHA-256). This algorithm is supported in hardware by many

machines, making it quick to compute. SHA-256 generates an output of 32 bytes (1 byte = 8 bits, 32 bytes = 256 bits), which is typically displayed as a 64-character hexadecimal string.

2.6. Discussion :

The research is based on four main research questions to determine the relevant research paths in the domains of blockchain and big data. The study is based on the four key questions listed below.

RQ1: What exactly is blockchain technology and how does it work?

RQ2: What are the methods and methodology of the blockchain?

RQ3: What are the benefits and drawbacks of blockchain technology?

RQ4: How does blockchain deal with big data in real life, and how do they work in business and their applications?

RQ1: What exactly is blockchain technology and how does it work?

Blockchain is a distributed ledger, a global online portal that can be accessed by anyone and anywhere with internet access. Blockchain does not support the fabrication of papers, transactions, or other data [1]. Blockchain is a spreadsheet that has spawned hundreds of clones across the computer network [9]. After that, you can modify the ledger regularly and have a fundamental understanding of the blockchain concept [9]. Blockchain is a digital process and often submissive database. The Blockchain is a distributed ledger in which every block can obtain a copy of a new entrants record, implying that the info it stores is actually public and available to all, but no one can alter any of the records [8].

Every block contains an incentive for processing and confirming transactions [8]. As a result, these features make the blockchain ideal for keeping records open and allowing everyone to use it [9]. A blockchain is made up of many blocks in a chain, each of which contains data, the hash (address) of the block, as well as the hash of the previous block [8]. The data section included smart contracts, transaction records, and other sensitive information.The hash function is used to decode the block. When a new node is added to the chain, the hash of that block is automatically generated [11]. The following hash, also known as the prior hash, is the third element of the block. It is a hash or address of the earlier block in the chain [12]. The advantage of blockchain is that it eliminates the need for an intermediary between 2 people [8, 11]. Private signing is required for blockchain transactions [13]. Transactions can take many forms, including smart contracts, money, and so on. The data transaction process is made up of rules, logic, destination address data, and other authenticated information.

RQ2: What are the methods and methodology of the blockchain?

Blockchain technology is based on the peer-to-peer network principle, in which each node receives a copy of the previous node [9]. There really is no centralized entity in this chain, and each node of the chain or network acts as a client or server. Transactions on the blockchain must be validated and approved [12]. Every network node must check the other node, and as a result, the intermediary effort is eliminated from this innovation [1].

Blockchain technology is also considered a decentralized network because it stores private customer records and manages them effectively [1]. Whenever a fresh transaction occurs in this network, existing molded it and make a track of the new transaction, and a data update is created in the chain, which is already known as extracted of payment, and after the establishment of the modern block, proof of work is performed automatically [12], in which hash of a block is produced for the authentication of the block, and previous hash also develop to involve block.

As a result, a chain of blocks is formed, which is also known as the blockchain. If someone wants to temper data, the hash of the block keeps changing, and the preceding hash of the next block is viewed differently. If an inaccurate block is formed as a result of tempering in any block, the chain of blocks is also disrupted [8].

If everyone wants to make a legal change, they will use the proper methodology known as proof of work, in which every node in the network legitimizes the node and obtains a copy of the node, and then the process will happen place [1]. So, in this innovation, short tempering in data is difficult [13]. The spreadsheet is used in this innovation to remove imperfection or transparency; the main concept of the ledger is community chain access for everyone [12]. If other nodes do not verify or reject an illegitimate operation, it is rejected outright and no single block is created. All data or information in a network is authenticated [11].

RQ3: What are the benefits and drawbacks of blockchain technology?

Each innovation has advantages and disadvantages; we have distinguished the benefits and drawbacks of blockchain technology, but we will only discuss the benefits and drawbacks of this technology here. Once a new block is verified and added to the chain, it is permanent and cannot be changed or removed, and this feature of blockchain is referred to as immutability. This blockchain feature increases network security and makes network accountability easier [8]. To increase the security of this technology, encryption and decryption are used to keep data safe from unauthorized persons/users. Transactions in this technology often needed validation from other network nodes [8]. Because of the high protection and confidentiality of blockchain technology, anybody can easily conduct transactions [8].

Throughout this technology, any transaction must be acknowledged by other nodes, and this move leads to blockchain transparency [1]. Reversible transaction processes are not possible in blockchain technology. Since this step eliminates fraud from the transaction, the transaction cannot be reversed in this technology [11]. Irreversibility is also a drawback because if anyone accidentally executes a transaction in this chain, it is up to the next block/customer to return back or not. According to numerous studies, too much verification is considered

a disadvantage; if anyone wants to alter his/her details or data, they must thoroughly conduct proof of work [11]. Since data in blockchain technology is open to anyone and everyone can easily read it, we cannot store data in such a way that only validated users have access to data. The researcher suggested an emerging approach, but it is unclear if it would function efficiently or not [13]. The main disadvantage is the transaction delay. Transaction delays may occur as a result of proof of work, confirmation, or confirmation of transactions from all network nodes. In short, blockchain technology allows you to do a lot with data, such as protect it from fraud, temper it, and keep permanent records [7].

RQ4: How does blockchain deal with big data in real life, and how do they work in business and their applications?

Both blockchain and big data are separate technologies, but both are currently in full swing [12]. As we have already mentioned in previous sections regarding blockchain, it is a distributed ledger that stores records indefinitely [15]. In several ways, blockchain and big data boost data efficiency. Big data refers to large amounts of data that cannot be easily handled or processed [13]; it necessitates a great deal of effort and strategies.

Previously, large amounts of data were managed by different procedures, but they took a long time to process. As time passed, new techniques and technology were implemented, but they were rejected due to performance, security, and other factors. Blockchain technology has entered the market with the primary goal of increasing protection, eliminating scams and fraud, and managing data effectively; however, as time passes, this technology is advancing [13].

Furthermore, by using this new technology, businesses are storing their large amounts of data in blockchain while saving a significant amount of money and time [11]. Blockchain technology can store a wide range of data and handle and process it effectively [11]. This technology also enables smart contracts to execute transactions automatically in a matter of seconds, reducing transaction effort [12].

This technology is now being used in a variety of industries. This system was used in the banking industry to keep track of user accounts. It is also used in the health care sector to maintain patient records that are open to staff [16]. In the field of education, educators have embraced this technology to provide material to students effectively and safely. A decentralized network enables authenticated consumers to connect data from anywhere [17].

Although cryptocurrency is the most common application of this method. Satoshi Nakamoto used this approach to create bitcoin technology for the first time in 2009[16]. When using this currency, every transaction is made by a proper non-removable record that can be easily monitored [16]. In this method, each transaction record is permanently and easily traceable, so no one can alter it [18]. Almost 50 banks in Japan's banking sector have agreed to use Ripple. Ripple is a network that is open to the public and is based on the blockchain technology principle [19]. This method allows for low-cost, dependable transactions [20]. The collaboration of these banks reduced transaction time [18, 21].

2.7. Comparative analysis of traditional payment method vs cryptocurrencies:

A summary of the positive and negative factors gleaned from a comparison of conventional and crypto payment methods. Positive and negative aspects are depicted in table columns, showing the benefits and drawbacks of both payment systems.

Social acceptance: The conventional payment scheme is used all over the world and is the industry norm. However, the crypto payment system is prohibited in some countries, limiting its accessibility in comparison to the conventional payment system.

Authority: From their perspective, the conventional payment method offers a certain degree of protection; however, this security in the centralized system is not 100 percent safe.

In comparison to the conventional payment system, this is a significant change in the crypto payment system since all nodes in the decentralized network have their own copies of all completed transactions. One downside of this scheme is that there is no centralized body in charge of saving money for clients.

Flexibility: One benefit of the cryptocurrency payment method is the ability to submit worldwide transactions at any time with very low fees, whereas conventional payment systems take much longer to execute the transaction.

Payment processing: There is no need for a central authority to approve the transaction, and the crypto payment system has many other limitations.

Transaction speed: One advantage of using cryptocurrency as a payment method is that transactions are completed instantly.

Transaction fee: One benefit of using cryptocurrency as a payment method is that transaction costs are very low or non-existent. Irreversible: When using a crypto payment system, the client should think twice before performing the payment because there is no going back once the transaction is completed. Anonymity: The crypto payment system conceals information about the clients or nodes.

2.8. Objective :

The method, as well as some features of the PRISMA statement, have been adopted to provide a straightforward, reproducible, and scientific literature analysis of blockchain-based applications. The following measures are part of the overall methodological approach:

1. Determine the need for the review, prepare a review plan, and establish the review procedure.
2. Identify the study, choose the studies, evaluate their accuracy, make notes, collect data, and synthesize the data.
3. Report the review's findings.

3. Survey Discussion :

The review of the selected literature yielded a number of insights into the shortcomings of blockchain technology and its applicability across a broad range of domains. Blockchain is now being used in a wide range of science and business sectors, creating infinite possibilities for exploration. However, as with any new technology, problems and difficulties arise. In this segment, we explore some of the shortcomings of blockchain technology and propose some avenues of fruitful future research.

Table 4: A comparison of the characteristics and prerequisites of blockchain versus conventional databases.

Attributes	Prerequisites & determinants
Trust	a scarcity of trustworthy third parties Immutability Accountability a slew of untrustworthy authors Transactions between individuals on a peer-to-peer basis
Context	Transaction tracability Transactional verifiability Notarization of background data/transactions Data security Transparency The right to privacy
Performance	Payment speed and latency Costs of upkeep Duplicate work Adaptability
Consensus	Engagement Rules Verified are needed. Communication between payments of different writers that are autonomous/dynamic

Relation to the study results, we highlight the criteria of each sector and created a structure (Table 4) to assess the suitability of blockchain-based solutions. More specifically, we compare blockchain's ability to conventional databases in four major domain areas: necessary confidence assumptions, background criteria, performance characteristics, and required consensus mechanisms. To determine the value of each requirement, a three-level scale (low, medium, and high) is used.

The platform serves as a robust tool for professionals attempting to determine whether or not blockchain can improve their processes. In terms of confidence, blockchain prevents the use of trusted third parties, on which databases depend, and thus improves information security and validity.

Table 5: Major Developments related to DLT in India

Report	Released	Select Takeaways related to DLT and Blockchain
White Paper: IDBRT, Blockchain Technology Applications in the Banking and Financial Sector in India.	January 2017	To investigate the viability of blockchain technology in the banking and financial sectors, two proofs-of-concept (POC) use cases were created: domestic trade finance with a sight Letter of Credit and enhance data payments.
Inter-Regulatory Working Group on FinTech and Digital Banking of the	February 2018	Before effectively regulating this space, there is a need to develop a deeper understanding of various FinTech

Reserve Bank of India (Chariman: Sudarshan Sen).		products and their interactions with the financial sector, as well as their implications for the financial system.
Finance Minister's speech in Budget 2018-19	February 2018	The government will investigate the use of block chain technology proactively in order to usher in the digital economy.
Blueprint of Blockchain Platform for Banking Sector and beyond, IDBRT	January 2019	The report goes into how to build a useful blockchain that can be used as a forum for launching various applications.
Report of the Committee to propose specific actions to be taken in relation to Virtual Currencies (Chairman: Subhash Chandra Garg)	July 2019	The Committee recommends that the RBI investigate the feasibility of using DLT-based systems to allow faster and more secure payment infrastructure, especially for cross-border payments.
Report of the Steering Committee on FinTech Related Issues (Chairman: Subhash Chandra Garg).	September 2019	Throughout the sense of public sector blockchain-based trade finance, the Committee recommends that the Ministry of MSME collaborate with DFS and the RBI to evaluate and introduce block-chain solutions in trade finance for MSMEs in public sector banks.
Enabling Framework for Regulatory Sandbox, RBI.	August 2019	Scientific advances, such as smart contracts and Blockchain-based applications, may be considered for research under regulatory sandbox cohorts. On November 4, 2019, the RBI invited applications for its first cohort of Regulatory Sandbox with the theme of 'Retail Payments.'

Blockchain technology is often appropriate where transactions and operations must be tracked (sequential chain of events) or when operations require high protection and privacy (centralized data structures are more vulnerable to malicious attacks than decentralized data structures). Since blockchain does not need hosting, it can offer substantial cost savings in terms of maintenance. Finally, the consensus mechanisms used in blockchain networks enable several writers to change the database and provide a definitive transaction log on which all nodes can be proven to agree.

4 Conclusion:

Although blockchain implementations are becoming more commonly used, several problems remain unresolved. As a result, blockchains can become not only more flexible and effective but also more robust. Individually, the features they include are not original, and the majority of the mechanisms on which they are built have been well-known for years. However, the combination of both of these characteristics makes them suitable for a wide range of applications, justifying the strong interest from a variety of industries. As blockchains grow, their implementations are expected to expand beyond the industries/domains mentioned in this study. Blockchain technology and related Digital Currency Technologies (DLT) form the foundation of a decentralized network that can exchange digital money and handle financial and real-estate assets autonomously. The concept of a decentralized Web is re-enacted, as we can ensure trustable, reliable, and accountable updates among autonomous participants without the use of a central server. The whole study reviews the major DLTs and Blockchain versions, as well as a brief analysis of the cryptocurrencies that are circulating on these DLTs. However, while many people want to sell blockchains as a panacea and a replacement for servers, this is far from the case. As previously mentioned, there are several situations in which traditional databases can be used instead. Furthermore, we defined the most important individual characteristics for and application domain. This simplifies the selection of the appropriate blockchain and the frameworks for tailoring the blockchain to the actual requirements of the project.

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