

The Benefits of Using Cloud Services in The Organizational Process

Dr. Zaid Yacoub Abu-Bajeh *

Business Dept., National University College of Technology, Jordan

*Corresponding author E-mail: zaid_n@hotmail.com

Received: December 30, 2025, Accepted: February 18, 2026, Published: March 2, 2026

Abstract

The world is currently experiencing a knowledge boom and renaissance that has led us to refer to this period as the "time of knowledge". Science has been made possible by the human mind over time, and this has led to the development of practical and scientific methods for acquiring, understanding, applying, and benefiting from knowledge. As a result, throughout time, organizations seek to provide high-quality e-services that will ensure that they have a better understanding of both themselves and their surroundings and the ability to coexist and adapt to them. Companies, particularly in developed nations, are constantly working to create the best practices to fulfill this goal. This calls attention to cloud services as a crucial component of the strategic use of IT. Cloud services offer a range of characteristics and advantages for the business process that are utilized by different models of online services. These features can be used in a variety of ways to support organizations objectives and introduce technology into business settings. Several business objectives can be served by cloud technologies, including minimizing fixed costs in IT infrastructure, remaining flexible, enhancing collaboration, improving data management and facilitating innovation. This paper, which focuses on cloud services, argues why using them is crucial to organizations in this era and highlights the need for additional studies in this area, as well as active participation in the evaluation, selection, and integration of services.

Keywords: Cloud Service; Cloud Computing; Organizational Process; Cloud Characteristics; Collaboration.

1. Introduction

The integration of new technologies, such as cloud computing systems and automation, has become increasingly relevant in today's digital age. These technologies enable decision-makers to access knowledge and information at any time and from any location, without being restricted by storage spaces, security measures, or even tools. This has accelerated progress in all areas of business and raised important questions about the nature of business itself as well as how best to develop it. The adoption of e-business technology has grown intertwined with worldwide trends in business development. Therefore, the only way to develop the organizational process is to develop the tools and technology methods that are used. This will make it necessary to rely on dynamic cloud services, which transfers local computers' processing and storage capacity to a server that can be accessed over the Internet and helps turn information technology from products to services. It will also help to overcome technological barriers in developing countries. In this context, cloud services refer to internet-based computing where computers and other devices can access shared software, resources, and information whenever they need it. According to [1] Since information technology is developing quickly, cloud services are now available to investigate the state of computing innovation. A cloud service is a model that enables network access to a collection of configured computers when needed and appropriately. It also provides resources, including servers, networks, storage, apps, and services, that can be quickly launched and provided with little effort or interaction from the service provider [2]. The freedom to use a collection of services and storage areas that can be linked with apps to help with the network and business communication is known as a cloud service. These resources can be easily controlled through user-friendly interfaces [3]. Because of this, users of the cloud system rely less on local networks and devices, and the work system will switch from local to highly capable cloud devices with fast connections. This will aid in the development of everyone who wishes to supervise any-time any-place as much as possible through interactive communication from any location, supporting the organizational process, boosting productivity, and, cutting costs and knowledge sharing without compromising the quality of business [4] [5].

Therefore, in order to benefit from activating and facilitating tasks and accomplishing the goals of the organizational process, companies must rely on cloud services that ensure they can adapt to the nature of the current technological revolution trend. Companies can quickly set up their cloud computing environment without having to buy any infrastructure [6]. Users of cloud computing services can access data, applications, and computing resources through network-based platforms at any time and from any location. This capability enhances organizational interaction by enabling teams to work collaboratively on shared projects in real time, thereby improving coordination and workflow efficiency [7]. In addition, cloud-based environments facilitate cross-unit interaction by centralizing data and

applications, allowing multiple users to simultaneously contribute to tasks and processes regardless of physical location, which supports more integrated organizational operations [8].

This paper contributes to the existing body of knowledge by providing a structured narrative review of cloud services and their role in supporting and enhancing organizational processes. While prior studies have often examined cloud computing from either a technical or managerial perspective, this research integrates both dimensions to explain how cloud service characteristics translate into tangible organizational benefits. By synthesizing findings from a wide range of academic studies, the paper identifies common patterns, key advantages, and contextual considerations associated with cloud service adoption. This integrated perspective offers a clearer understanding of the strategic importance of cloud services in organizational development and supports decision-makers and researchers in evaluating their role in contemporary business environments.

2. Methods

Cloud services are tools accessible through global networks for utilizing information and communication technology. These discussions about these technologies and services frequently include topics like the types of cloud computing, their characteristics, benefits and obstacles of using them, and how using them can improve the organizational process.

2.1. Databases in cloud services & organizational process

This study is based on a structured narrative review of the literature addressing cloud services and their role in organizational processes. To ensure comprehensive coverage of both technical and organizational perspectives, the literature search was conducted using several reputable academic databases, including IEEE Xplore, ACM Digital Library, SpringerLink, Elsevier (ScienceDirect), and Google Scholar.

These databases were selected due to their strong coverage of research in cloud computing, information systems, and organizational studies. The search strategy focused on peer-reviewed journal articles, conference proceedings, and authoritative reports published between 2012 and 2024, reflecting both early and mature stages of cloud service adoption.

Keywords such as cloud services, cloud computing, organizational process, business performance, and digital transformation were used in various combinations to identify relevant studies. This approach ensured the inclusion of literature examining cloud services not only from a technological standpoint but also in relation to organizational performance and process transformation. The database codes used in Table 1 are labeled P1 through P4 to indicate the electronic databases according to a classification.

Table 1: Databases Used in Research

ID	Databases	URL
1	IEEEExplore	https://ieeexplore.ieee.org
2	ACM	https://www.acm.org
3	ResearchGate	https://www.researchgate.net
4	Google Scholar	https://scholar.google.com

2.2. Criteria for selecting the papers for review

Following the initial literature search, retrieved studies were screened based on predefined selection criteria to ensure relevance, quality, and alignment with the research objectives. Papers were included in the review if they met the following criteria:

- Addressed cloud services (IaaS, PaaS, or SaaS) within organizational or business environments.
- Examined the impact of cloud services on organizational processes, efficiency, decision-making, or performance.
- Were published in peer-reviewed journals, reputable conference proceedings, or authoritative institutional reports.
- Provided empirical evidence or well-grounded conceptual analysis.

The selection process aimed to ensure that the reviewed studies contributed meaningfully to understanding how cloud services support organizational processes rather than focusing solely on technical implementation details. Figure 1 displays the adopted research review protocol, which has multiple stages of selection criteria, such as inclusion and exclusion.

2.3. Papers excluded from the review

86 publications from earlier research on cloud computing and services that focus on the features of cloud services, particularly in new businesses, are reviewed. The focus is on how using cloud services can help the organizational process. To select papers and research that might be relevant, the titles, abstracts, and conclusions of the papers that were identified were read. As expected, many of the papers that surfaced from the search were irrelevant to the review due to the broad nature of the search terms for cloud services and organizational process. To maintain the focus and quality of the review, certain papers were excluded during the screening process. Studies were excluded if they:

- The Papers that did not clearly articulate their research objectives.
- A number of publications lack qualitative or quantitative assessments of the mediation's eligibility.
- The papers identified by the search terms, were excluded from review since they lacked an observational assessment.

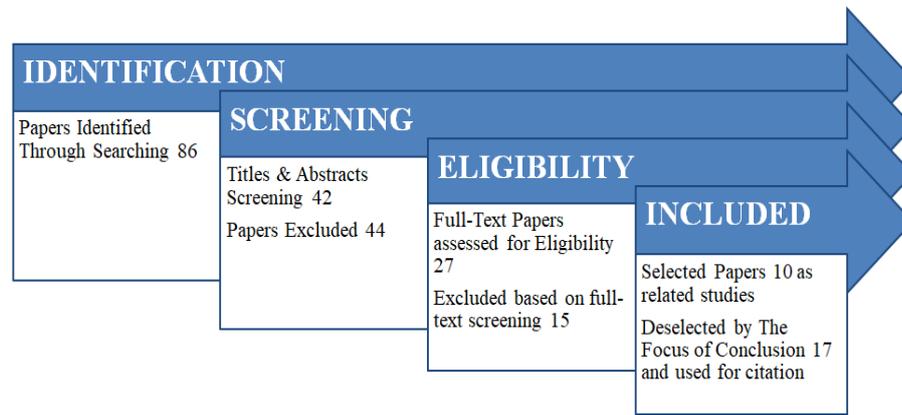


Fig. 1: Researches Review Protocol.

For the reasons listed above, 44 of the papers and research have been excluded; 42 papers were cited, and 10 of them were considered as related studies. This review paper's objective is to enlighten business institutions and researchers for upcoming studies, particularly regarding the degree to which utilizing cloud services can enhance the business process. The exclusion of these studies ensured that the final set of reviewed papers aligned closely with the research objectives and supported meaningful synthesis of findings related to organizational processes and cloud service benefits.

3. Technical Foundations of Cloud Services Supporting Organizational Processes

Cloud computing is built upon a set of architectural and infrastructural mechanisms that determine its operational capabilities and, consequently, its organizational value. At the core of cloud environments lies virtualization technology, which enables the abstraction of physical hardware resources into scalable virtual machines and containers. This abstraction layer allows dynamic allocation of computing power, storage, and networking resources according to real-time demand, thereby ensuring elasticity and efficient resource utilization. Contemporary research highlights that virtualization and container orchestration frameworks significantly enhance workload portability and infrastructure flexibility in distributed systems [9] [10]. Another fundamental architectural feature is the multi-tenant model, in which multiple users or organizations share the same physical infrastructure while maintaining logical isolation of data and processes. This architecture improves cost efficiency and scalability but requires robust isolation mechanisms and access control frameworks to prevent data leakage and performance interference. Studies in cloud security and distributed computing emphasize that secure multi-tenancy depends on advanced identity management systems, encryption protocols, and zero-trust security architectures [11] [12]. In recent years, hybrid and multi-cloud architectures have further transformed the technical landscape of cloud computing. Rather than relying on a single provider, organizations increasingly distribute workloads across private and public cloud infrastructures to enhance resilience, avoid vendor lock-in, and optimize performance. Empirical analyses demonstrate that hybrid architectures improve fault tolerance and business continuity by enabling redundancy and geographic distribution of resources [13]. These distributed configurations are particularly relevant for organizations operating in dynamic or high-risk environments, where uninterrupted service availability is critical.

Security and data governance constitute another essential technical pillar. As organizations migrate sensitive workloads to cloud environments, issues related to privacy preservation, regulatory compliance, and secure data transmission become central concerns. Modern cloud security frameworks integrate encryption-at-rest and encryption-in-transit mechanisms, role-based access control, anomaly detection, and AI-driven threat monitoring systems to mitigate risks in large-scale distributed infrastructures [14]. Such mechanisms strengthen trust in cloud-based systems and enable organizations to align technological innovation with regulatory and strategic requirements. Collectively, these technical foundations—virtualization, multi-tenancy, hybrid and multi-cloud architectures, and advanced security frameworks—provide the structural backbone that enables scalability, interoperability, and operational continuity. From an organizational perspective, these architectural capabilities translate into improved process agility, enhanced collaboration across distributed units, and greater capacity for digital transformation. Therefore, understanding the technical architecture of cloud computing is essential for explaining how cloud services function not merely as operational tools but as strategic infrastructural enablers of organizational development.

A comparative analysis of the recent literature reveals that while scalability, elasticity, and virtualization are consistently identified as core technical drivers of cloud adoption, studies differ in their interpretation of how these technical attributes translate into organizational outcomes. Some research emphasizes cost efficiency and operational optimization as the primary outcomes of scalable infrastructures, whereas more recent contributions highlight agility, resilience, and strategic adaptability as equally significant consequences. Furthermore, while earlier studies conceptualized cloud computing mainly as an infrastructure-level innovation, contemporary research increasingly positions it as an integrative technological architecture that enables interoperability with artificial intelligence, data analytics, and distributed platforms. This shift indicates an evolution from viewing cloud services as operational tools toward recognizing them as dynamic digital ecosystems that reshape organizational processes at both structural and strategic levels. Such distinctions underscore the need to analyze cloud adoption not merely through technical performance indicators but through its broader systemic impact on organizational transformation.

4. Organizational Process

Organizational processes are fundamental mechanisms through which businesses operate, evolve, and achieve their strategic objectives. These processes encompass a variety of activities, including decision-making, communication, and resource allocation, where the design and management of processes can significantly impact an organization's performance.

Furthermore, in order to maintain a competitive advantage, businesses must constantly adapt to changing market conditions and consumer preferences; this requires active information exchange, which can lead to improved problem-solving capacities and process innovation. The ability to learn from both triumphs and failures enables businesses to continuously refine their processes, resulting in improved performance [15]. The integration of cross-functional teams into organizational workflows has emerged as a successful technique for improving performance. Such teams bring together a wide range of perspectives and experience, encouraging collaboration and innovation [16]. Cross-functional teams play a critical role in reducing organizational silos by streamlining procedures, improving communication flows, and supporting more informed decision-making processes [17]. Through their collaborative structure, these teams facilitate knowledge exchange across functional boundaries, which is essential for sustained process improvement.

In this regard, the integration of teams into process integration has been widely recognized as an effective means of enhancing performance outcomes. By leveraging diverse functional expertise, organizations can strengthen integrative problem-solving capabilities and promote process innovation. [16].

Accordingly, the researcher argues that several interrelated factors—such as organizational learning, effective team interaction, knowledge exchange, data management practices, and the integration of emerging technologies—are fundamental to supporting process effectiveness. A comprehensive understanding of these elements enables organizations to design and implement processes that enhance operational efficiency while promoting adaptability within dynamic business environments. In this regard, cloud services play a significant role in shaping organizational workflows by supporting collaborative practices, strengthening data management capabilities, and facilitating innovation in service delivery. [18].

5. Cloud Computing

Through services offered by cloud computing providers, cloud computing is a model that helps reach resources and IT capabilities like applications and server infrastructure, virtual machines, storage spaces, communications, and social networks while lowering costs and administrative work for service users. A service technology system known as "cloud computing" enables users to store their data and files on servers for cloud computing, which they can access over the Internet at any time and from any location, all without having to worry about how the service operates. [19]. A cloud service is an Internet-centric computing solution that uses web-centric software and devices to provision resources over the Internet for enterprises to receive IT services. This eliminates the need for the company to have a private IT architecture. [20].

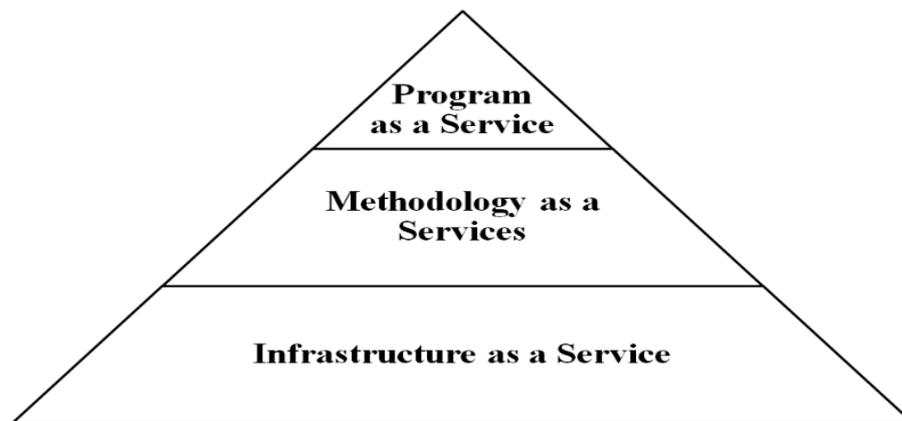


Fig. 2: The Cloud Computing Technology.

A general term for a new class of computer-based applications and services based on networks and the Internet is cloud computing, as shown in Figure. 2, several integrated computer services should be made available to users in order to surpass the limitations of local resources and to enhance their convenience. These services should include data storage, program processing, task scheduling, and high-speed internet access in developed nations. When a user is connected to a global network, these resources should be easily controlled by them through an easy-to-use interface.

5.1. Type of cloud computing services

Cloud computing services can be divided depending on the type of service that the cloud provides, as follows:

1) Infrastructure as a service (IaaS)

The cloud infrastructure is now available to users based on needs, with dependable, flexible, safe infrastructure or devices as a service to provide virtual capabilities like hard memory, central processing unit, capacity, or communications. Clients purchase servers, software, data center space, and network equipment as a fully outsourced service. An Infrastructure-as-a-Service (IaaS) provider makes infrastructure investments, deploys and maintains it, and offers subscribers physical or virtual hardware to essentially eliminate initial investment in installations in their businesses. [21].

2) Software as a service (SaaS)

This kind enables the user to run a variety of programs via the cloud server without having to buy, install, or reconfigure their PC. The cloud owner is in charge of all these processes and programs, which operate across all kinds of devices as virtual computers that execute software, and the user can create, modify, and distribute the contents with others. Because SaaS providers do not require hardware installation, license fees, middleware configurations, or system administration, users can enjoy improved software installation, configuration, and customization. [22]. More academic institutions are switching to SaaS for desktop apps, giving students free access to the collaborative tools they want [23].

3) Platform as a service (PaaS)

Because the cloud platform is an operating system for the user and a software environment, database, and web server that the user can manage without incurring any costs associated with purchasing hardware or software components, it is designed to function as a ser-

vice. A Platform as a Service (PaaS) offers an execution and development environment on top of cloud infrastructure, enabling a wide range of comprehensive application-level services [24]. The cloud platform makes it easier to create and implement applications without the expense and hassle of purchasing and maintaining the necessary hardware and software [25]. The entire infrastructure which needed to support the development and delivery of web applications and services is provided by the cloud platform. Also, cloud computing services can be divided depending on Infrastructure, as shown in Figure 3.

4) Public cloud

Many tenants can access a shared hosting environment offered by this kind of cloud. The user's internal operations are not integrated with this cloud. [26]. The most challenging issues with public cloud computing, despite the low operating costs for users, are security issues.

5) Private cloud

To enable cloud computing in internal data centers of businesses or users to secure sensitive data, private clouds are used. Upgrades, upkeep, and safety can be balanced with the highest workload and the highest utilization of available resources, making them easier to manage. [27]. Public cloud service providers offer virtual private clouds by isolating a section of the cloud and making it available privately while utilizing shared IT resources, according to public cloud flexibility and private cloud reliability.

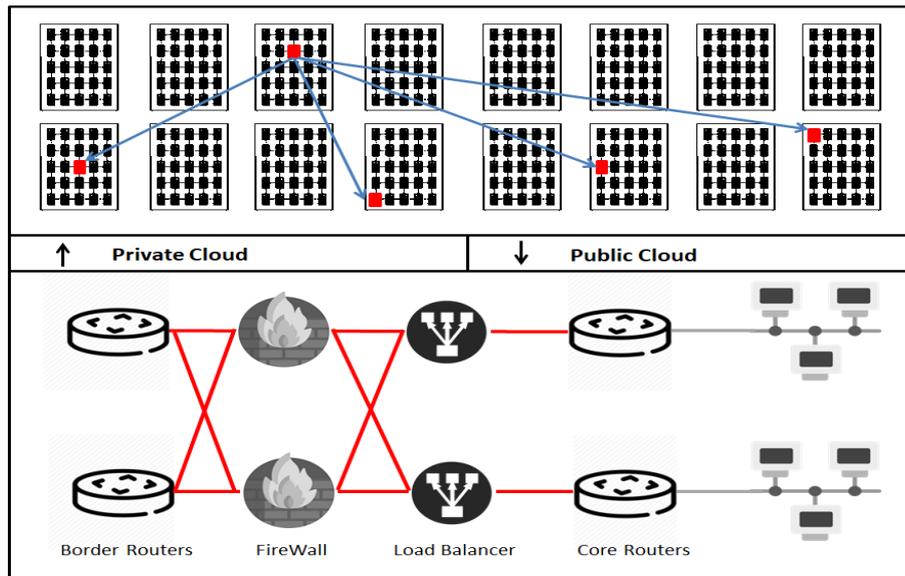


Fig. 3: Public and Private Clouds Infrastructure.

5.2. Cloud services characteristics

Because each model has a different set of specifications, cloud service providers offer varying models. These factors have led to the increased efficiency and dependability of cloud-based services. Resources, architecture, services, and economics are the four core elements of cloud computing qualities. The following is a summary of each section, which is divided into different sub-features that are categorized as characteristics of cloud computing:

5.2.1. Resource

Because of virtualization, some resources in cloud-based environments are not fully shared despite the current isolation. Multi-site data centers are used to optimize service benefits and boost network performance. [28]. The capacity to supply dynamic resources and disassemble resources in response to demand can lower the cost of resources and operations. [29].

5.2.2. Structure

Each owner of a layer in the cloud-based services layer structure is assigned specific duties and objectives, and cloud computing resources and services are typically available online. As a result, the speed at which you can access the internet is primarily dictated by the speed of your Internet service provider (ISP). The capacity to run multiple operating systems in cloud-based environments, however, is one of the key distinctions between cloud computing and related technologies. [30]. Additionally, cloud models don't need service workflow coordination, and their capacity to isolate data in cloud environments enhances security. Nonetheless, one of the trickiest issues with cloud computing is still security.

5.2.3. Services

A crucial component of many cloud models is service management, which enables them to provide a service-driven operating model based on a service level agreement with quick response. This is made possible by the automatic resource management function, which, for instance, transfers resources from nodes in the event of a failure. [31]. Furthermore, the ability of service providers to offer superior support services is contingent upon the robust infrastructure of cloud computing.

5.2.4. Economic

Because of the resource pool available, cloud service providers can offer services at a lower cost than in non-cloud service models. Additionally, cooperative efforts and shared resources cut down on energy consumption and bring customers and service providers closer to the green IT idea. Reduced installation, testing, maintenance, and upgrade costs are also included.

5.3. Cloud services benefits

Many people have been drawn to cloud computing services due to its appealing features as an emerging technology. Additionally, the cloud services industry's explosive growth has prompted well-known IT firms to launch a range of cloud-based services. As a result, the following benefits of cloud services can be summed up:

- 1) The permanent data warehouses can be accessed from any location at any time without the need to create backups of your data on external drives or between devices. One of the essential resources offered by the cloud service provider to host various resources, including data and apps, is storage [32]. Through a cloud backup service that is accessible in an emergency and replicated in numerous remote locations, providers can provide recovery services. [33].
- 2) A parallel cloud computing system enables the simultaneous execution of multiple processes [34]. Cloud computing is a technology that combines the ideas of storage, processing power, networking, and sharing across multiple devices to provide end users with on-demand services that align with the concepts of flexibility, safety, and circulation. [32].
- 3) Encourage proficiency in content sharing to foster audience participation, peer evaluation, and a sense of ownership.
- 4) Due to the low operating costs of the cloud environment, you can avoid wasting money on deteriorating assets and on internal resource capacity that is needed to adapt to changing needs [6]. Big Data technology can be used with cloud computing, saving you money on hardware and software purchases. [7]. As a result, expenses for infrastructure, equipment upkeep, updates, technical support, software acquisition, service use, and cloud-based apps can be decreased.
- 5) Make sure the service is operational forever. The provider of services ought to guarantee that the applications and/or services are constantly available and reachable via the internet [33], where cloud computing service providers pledge to deliver services that are reliable and efficient while also addressing any problems that may occur. The service provider can expeditiously implement, maintain, manage, and improve the solutions developed by the IT Department. [7].

6. The Benefits of Using Cloud Computing Services in The Organizational Process

Cloud computing provides a set of features and benefits for the organizational process that uses an online business model, which can be harnessed to serve organizational goals in several ways, including collaboration with others and facilitating innovation in service delivery, as well as interaction and flexibility for business resources, which leads to delivering the technology to organizational environments, and these advantages can be summarized as follows:

- 1) Make products, services, information, and feedback easily accessible to customers and teams. In cloud-based environments, processing is concentrated on granting rapid access to a collection of resources [32].
- 2) Users of cloud services can access data, apps, and computing resources via the network at any time and from any location [7]. Users can access resources via the Internet. [32]. Additionally, because it uses the cloud to access organizational systems from various devices without requiring the presence of applications on the user's device, employees are able to participate in the business process from a variety of locations as long as they have internet access.
- 3) Enable employees to customize their work environments, interact with colleagues, create and share information, and manage user-specific access to organizational resources. By centralizing data and applications within cloud-based platforms, organizations can also support concurrent task execution and coordinated work practices among users working on shared projects. [7].
- 4) Businesses can quickly set up their cloud computing environment without having to buy any infrastructure [6]. By migrating to the cloud, customers can avoid wasting a lot of money on infrastructure or program purchases. [7]. It is the responsibility of cloud service providers to maintain app updates and offer technical support. This kind of help will reduce time, money, and the need to hire specialized staff for maintenance. [33]. As a result, cloud computing services offer business organizations affordable solutions and improve the effectiveness of the business environment.
- 5) Delivering a cost-effective and flexible business environment in terms of expanding infrastructure. It's necessary to dynamically allocate resources to clients in a cloud. Therefore, it is important to support the resource pool's elasticity to provide flexible supplied IT resources [35]. Resource elasticity benefits customers without requiring them to make large purchases. [6].

As stated above, cloud services technology can be used to support business objectives in a variety of domains, including creating new services and improving customer experiences via a website or application that resides on a virtual cloud. Generally, a closer examination of the reviewed studies indicates broad agreement that cloud services contribute positively to collaboration, data accessibility, and process efficiency within organizations. Nevertheless, variations can be observed in the way these benefits are conceptualized and measured. Some studies emphasize improvements in communication speed and information sharing across departments, whereas others focus more on operational efficiency and cost-related performance indicators. In addition, while several contributions describe cloud adoption as a direct driver of enhanced organizational performance, other studies frame its impact as indirect, mediated through improved data integration and workflow coordination. These differences suggest that the organizational value of cloud services cannot be interpreted as uniform; rather, it depends on how cloud capabilities are embedded within existing process structures and operational practices. Such comparative insights highlight the importance of examining cloud computing not only as a technological solution but also as a structural component influencing organizational processes in diverse ways.

7. Obstacles to Using Cloud Computing Services

The following is a summary of the challenges to maximizing the use of cloud service technology:

- 1) Information security and privacy concerns are reflected in our fear of our files and information status when we entrust them to cloud service providers, who are then in charge of safeguarding our data. To provide a secure environment, service providers must address threats related to networking and cloud computing [36]. Cloud service security is very important. [34].
- 2) Rights Protection: This is one of the issues that users are concerned about because there is no assurance that their intellectual property rights will not be infringed upon. Data security is among the main issues of cloud services [36].

- 3) Internet availability and speed: Some cloud services necessitate a constant high-speed connection, which may not be available in developed nations. Numerous factors, including network latency and inefficient use of hardware resources on both ends of the connection, can contribute to poor performance [34].
- 4) Dependency on Service Providers: Due to the challenges associated with transferring data and structures, certain businesses may have trouble connecting to their data sources and transferring the data to another cloud service resource.
- 5) Sharing Among Many Users: Another limitation of cloud computing is the sharing of network and storage resources among numerous users.
- 6) Reliability: it is crucial to confirm that the data have been deleted and are not still there; conversely, the potential for obtaining original data if it is lost or damaged.
- 7) Reuse: When many people use the same apps and hardware, there's a chance that crucial data will be lost.

8. Related Study

Numerous comparable or associated research papers address the use of cloud services and how organizations conduct their processes. Given the high upfront expenditures of infrastructure, cloud computing services allow for better flexibility, scalability, and cost efficiency in organizational operations [37]. Cloud-based solutions enable team-based knowledge exchange among team members, independent of physical location. [38] [5]. These systems enable users to collaborate on documents, securely share information, and interact via integrated messaging services, breaking down traditional organizational silos. [39]. Such teams bring together a wide range of perspectives and experience, encouraging coordinated work practices and innovation. [16]. Cross-functional teams that break down organizational barriers can expedite procedures, enhance communication, and lead to better informed decision-making. [17]. The collaborative nature of these teams promotes knowledge exchange, which is essential for continual process improvement. Organizations may safely store large volumes of data and access it from almost anywhere. [40]. Cloud computing eliminates the need for large on-premises infrastructures, which may be costly and difficult to manage. Cloud technologies allow businesses to develop apps fast and respond to market changes with agility. [18] [41]. To protect their cloud-based data, organizations must implement a complete security policy that includes encryption, access controls, and frequent audits. Furthermore, ensuring compliance with regulatory frameworks is vital for firms working in industries with severe data protection standards. [42].

9. Conclusion

The rapid integration of cloud computing technologies continues to raise critical questions regarding business development and the evolution of organizational processes. As highlighted throughout this review, process innovation, organizational culture, learning mechanisms, and team dynamics represent interconnected dimensions that shape how organizations respond to technological change. Addressing organizational process challenges, therefore, requires the continuous development of strategic approaches that effectively integrate emerging technologies into managerial decision-making and operational practices. In this context, cloud services play a central role in supporting task execution, improving coordination, and enabling organizations to achieve their strategic objectives more efficiently.

Based on the findings of this review, cloud computing has emerged as a particularly valuable technological enabler for organizations, especially in developing countries. Cloud-based organizational architectures support participation, engagement, and inter-organizational interaction, while reducing dependence on costly and complex on-premises infrastructure. This allows organizations to enhance flexibility, improve service quality, and strengthen their ability to adapt to evolving customer demands and rapid technological advancements. Consequently, reliance on cloud services represents not only an operational choice but also a strategic approach to sustaining organizational competitiveness and process effectiveness.

With regard to future research, several structured and prioritized directions can be identified. First, there is a need for in-depth empirical research examining the impact of advanced cloud service capabilities on organizational performance across different organizational models and sectors. Such studies would provide clearer insights into how cloud technologies influence decision-making quality, process efficiency, and service outcomes. Second, future research should focus on the organizational and managerial dimensions of cloud adoption, including governance structures, organizational culture, and employee readiness, to better understand the non-technical factors that shape successful implementation. Third, further studies are encouraged to investigate cloud-based data management practices, particularly those aimed at optimizing cost efficiency, enhancing data accessibility, and supporting real-time organizational decision-making. This direction is especially relevant for organizations seeking to leverage cloud computing as a foundation for knowledge sharing and collaborative work environments. Generally, by structuring future research along these prioritized dimensions, scholars can build upon the insights provided in this review and contribute to a more comprehensive understanding of how cloud services support and process integration in contemporary business environments.

References

- [1] M. Nasr and S. Ouf, "An Ecosystem in e-learning using cloud computing as a platform and Web2. 0," *The Research Bulletin of Jordan ACM*, vol. 2, pp. 134-140, 2011.
- [2] H. Trivedi, "Cloud adoption model for governments and large enterprises," *Unpublished MSc Thesis, Massachusetts Institute of Technology, Massachusetts*, 2013.
- [3] S. F. K. Qasem, "The effectiveness of some cloud computing applications in developing educational video production skills for primary school teachers in Jeddah," *The International Interdisciplinary Journal of Education*, vol. 6, pp. 204-215, 2017.
- [4] K. A. Alrasheed, W. Ahmed, and S. K. Alrasheed, "Enhancing construction project outcomes through mediated organizational performance in cloud computing adoption," *Discover Civil Engineering*, vol. 3, no. 1, p. 12, 2026/01/20 2026. <https://doi.org/10.1007/s44290-026-00408-y>.
- [5] A. Reis, C. Fraga, and A. J. Gouveia, "Cloud Computing Adoption as IT Strategy in Organizations: a Short Systematic Review," *Procedia Computer Science*, vol. 256, pp. 122-129, 2025. <https://doi.org/10.1016/j.procs.2025.02.104>.
- [6] R. Chandrashekar, M. Kala, and D. Mane, "Integration of Big Data in Cloud computing environments for enhanced data processing capabilities," *International Journal of Engineering Research and General Science*, vol. 3, no. 3, pp. 240-245, 2015.
- [7] A. H. Rashed, Z. Karakaya, and A. Yazici, "Big data on cloud for government agencies: benefits, challenges, and solutions," presented at the Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age, Delft, The Netherlands, 2018. Available: <https://doi.org/10.1145/3209281.3209360>.

- [8] E. Aljanea, F. Al-Anzi, and M. Alshayji, "Towards an efficient e-learning system based on cloud computing," in *Proceedings of the Second Kuwait Conference on e-Services and e-Systems*, 2011, pp. 1-7. <https://doi.org/10.1145/2107556.2107569>.
- [9] M. M. Lawan, S. Oduoza, and K. Buckley, "A systematic review of cloud computing adoption by organisations," *International Journal for Industrial and Manufacturing Systems Engineering*, vol. 6(3), pp. 39-48, 2021. <https://doi.org/10.11648/j.ijimse.20210603.11>.
- [10] N. N. Azizah, "Cloud Computing Adoption Trends: A Systematic Literature Review of Organizational Perspectives," *Journal of Computer Science, Information Technology Telecommunication Engineering*, vol. 5, no. 1, pp. 481-487, 2024.
- [11] A. Singh and K. Chatterjee, "Cloud security issues and challenges: A survey," *Journal of Network Computer Applications*, vol. 79, pp. 88-115, 2017. <https://doi.org/10.1016/j.jnca.2016.11.027>.
- [12] M. Ali, S. U. Khan, and A. V. Vasilakos, "Security in cloud computing: Opportunities and challenges," *Information sciences*, vol. 305, pp. 357-383, 2015. <https://doi.org/10.1016/j.ins.2015.01.025>.
- [13] D. C. Marinescu, *Cloud computing: theory and practice*. Morgan Kaufmann, 2022.
- [14] L. Alshaiyer, S. Almarri, and A. Albuai, "Federated learning for cloud and edge security: A systematic review of challenges and AI opportunities," *Electronics*, vol. 14, no. 5, p. 1019, 2025. <https://doi.org/10.3390/electronics14051019>.
- [15] N. Neelam, "The Fifth Discipline: The Art & Practice of the Learning Organization," *OPUS: HR Journal*, vol. 5, no. 1, p. 80, 2014.
- [16] S. Kozłowski, "Enhancing the effectiveness of work groups and teams," *Perspectives on Psychological Science*, vol. 13, no. 2, pp. 205-212, 2018. <https://doi.org/10.1177/1745691617697078>.
- [17] M. Becker, "What is the role of teams in knowledge management? Some indications from practice," *IJITM*, vol. 2, pp. 50-58, 01/01 2003. <https://doi.org/10.1504/IJITM.2003.002448>.
- [18] V. Donat *et al.*, "Examining the Impact of Cloud Computing on Organizational Performance: A Systematic Literature Review," presented at the 27th International Conference on Enterprise Information Systems, 2025. <https://doi.org/10.5220/0013478900003929>.
- [19] A. H. Shallal, "Design and implement an educational model by using cloud computing technologies," Master Computer Science PGC, ALNILAIN UNIVERSITY, 2017.
- [20] N. Sandu, E. Gide, and S. Karim, "Improving Learning through Cloud-based Mobile Technologies and Virtual and Augmented Reality for Australian Higher Education," in *Proceedings of the 2019 International Conference on Mathematics, Science and Technology Teaching and Learning*, 2019, pp. 1-5. <https://doi.org/10.1145/3348400.3348413>.
- [21] N. Junath and G. Shanmugarathinam, "A Cloud service and conceptual modeling of IAAS," 2012. <https://doi.org/10.1049/cp.2012.2193>.
- [22] B. Waters, "Software as a service: A look at the customer benefits," *Journal of Digital Asset Management*, vol. 1, no. 1, pp. 32-39, 2005/01/01 2005. <https://doi.org/10.1057/palgrave.dam.3640007>.
- [23] N. Turner, "Cloud Computing: A Brief Summary" *Lucid Communications Limited*, 2009.
- [24] A. Lenk, M. Klems, J. Nimis, S. Tai, and T. Sandholm, "What's inside the Cloud? An architectural map of the Cloud landscape," in *2009 ICSE Workshop on Software Engineering Challenges of Cloud Computing*, 2009, pp. 23-31: IEEE. <https://doi.org/10.1109/CLOUD.2009.5071529>.
- [25] B. Wheeler and S. Waggener, "Above-campus services: shaping the promise of cloud computing for higher education," *Educause Review*, vol. 44, no. 6, pp. 52-67, 2009.
- [26] P. Hofmann and D. Woods, "Cloud computing: The limits of public clouds for business applications," *IEEE Internet Computing*, vol. 14, no. 6, pp. 90-93, 2010. <https://doi.org/10.1109/MIC.2010.136>.
- [27] Y. Jadeja and K. Modi, "Cloud computing - concepts, architecture and challenges," 03/01 2012. <https://doi.org/10.1109/ICCEET.2012.6203873>.
- [28] Q. Zhang, L. Cheng, and R. Boutaba, "Cloud computing: state-of-the-art and research challenges," *Journal of Internet Services and Applications*, vol. 1, no. 1, pp. 7-18, 2010. <https://doi.org/10.1007/s13174-010-0007-6>.
- [29] M. D. Dikaiakos, D. Katsaros, P. Mehra, G. Pallis, and A. Vakali, "Cloud computing: Distributed internet computing for IT and scientific research," *IEEE Internet computing*, vol. 13, no. 5, pp. 10-13, 2009. <https://doi.org/10.1109/MIC.2009.103>.
- [30] R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic, "Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility," *Future Generation Computer Systems*, vol. 25, no. 6, pp. 599-616, 2009. <https://doi.org/10.1016/j.future.2008.12.001>.
- [31] M. Malathi, "Cloud computing concepts," in *2011 3rd International Conference on Electronics Computer Technology*, 2011, vol. 6, pp. 236-239: IEEE. <https://doi.org/10.1109/ICECTECH.2011.5942089>.
- [32] F. F. Moghaddam, M. B. Rohani, M. Ahmadi, T. Khodadadi, and K. Madadipouya, "Cloud computing: Vision, architecture and Characteristics," in *2015 IEEE 6th Control and System Graduate Research Colloquium (ICSGRC)*, 2015, pp. 1-6: IEEE. <https://doi.org/10.1109/ICSGRC.2015.7412454>.
- [33] V. Saxena and S. Pushkar, "Cloud computing challenges and implementations," in *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, 2016, pp. 2583-2588: IEEE. <https://doi.org/10.1109/ICEEOT.2016.7755159>.
- [34] J. Bolin and M. Yang, "Cloud computing: cost, security, and performance," presented at the Proceedings of the ACMSE 2018 Conference, Richmond, Kentucky, 2018. Available: <https://doi.org/10.1145/3190645.3190706>.
- [35] C. Fehling, F. Leymann, R. Retter, W. Schupeck, and P. Arbitter, *Cloud computing patterns: fundamentals to design, build, and manage cloud applications*. Springer, 2014. <https://doi.org/10.1007/978-3-7091-1568-8>.
- [36] H. Fellah, C. Mezioud, and M. C. Batouche, "Mobile Cloud Computing: Architecture, Advantages and Security Issues," presented at the Proceedings of the 3rd International Conference on Networking, Information Systems & Security, Marrakech, Morocco, 2020. Available: <https://doi.org/10.1145/3386723.3387880>.
- [37] P. Mell, "The NIST Definition of Cloud Computing," *Recommendations of the National Institute of Standards Technology*, 2011. <https://doi.org/10.6028/NIST.SP.800-145>.
- [38] D. Mourtzis, B. Schoinochoritis, and K. Vlachou, *A New Era of Web Collaboration: Cloud Computing and its Applications in Manufacturing*. 2015.
- [39] M. Martin, R. Hugues, and A. Puliatte, "The Use of Cloud-Computing to Promote Collaborative Learning in Higher Education," 2019, pp. 32-45. <https://doi.org/10.4018/978-1-5225-7763-8.ch002>.
- [40] S. Marston, Z. Li, S. Bandyopadhyay, J. Zhang, and A. J. D. s. s. Ghalsasi, "Cloud computing—The business perspective," vol. 51, no. 1, pp. 176-189, 2011. <https://doi.org/10.1016/j.dss.2010.12.006>.
- [41] A. Willie, "Impact of Cloud Computing on Organizational Agility and Innovation," 2022.
- [42] T. Oliveira, M. Thomas, M. J. I. Espadanal, and management, "Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors," vol. 51, no. 5, pp. 497-510, 2014. <https://doi.org/10.1016/j.im.2014.03.006>.