The Convergence of Digital Transformation and Sustainability: the Role of Information Professionals in Building a More Sustainable Future

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The Convergence of Digital Transformation and Sustainability: the Role of Information Professionals in Building a More Sustainable Future

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Abstract: Digital transformation has caused significant impacts in several areas of society, including environmental sustainability. The convergence of these two fields opens up new possibilities to face environmental challenges and seek innovative and sustainable solutions. In this context, the information professional must promote sustainable practices, ensuring that access to information and the use of digital technologies are aligned with the objectives of preserving the environment. This study aims to investigate the role of information professionals at this intersection, exploring sustainable practices and innovations to face environmental challenges. The research is bibliographic with a qualitative approach. The theoretical framework was retrieved from the Capes Periodicals Portal (a Brazilian and nationally recognized database, being of great relevance), in addition to consultations

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in manuals and specialized dictionaries on the proposed topic. It is considered that in the implementation of sustainable digital transformation in information environments, strategies such as Digitization and Operational Digitalization, Awareness, Training, Monitoring and Evaluation, Network Participation and Continuous Update stand out. By adopting innovative technologies, promoting sustainable practices and establishing strategic partnerships, these professionals are aligned with current demands and leading the way towards a more efficient, accessible and eco-conscious future.

Keywords: digital transformation; sustainability; information professional; sustainable practices.

Introduction

Archives, documentation centers, museums, and libraries serve society as centers of knowledge, education, and culture. The significance of these institutions extends beyond the mere preservation of books; they are dynamic spaces that promote democratic access to information and contribute to the formation of informed and culturally enriched citizens.

The constant renewal of collections, the incorporation of new technologies, and the provision of innovative services are key elements that keep these institutions attractive both to investors and avid readers seeking knowledge. Thus, archives, documentation centers, museums, and libraries are institutions that foster the development of more educated, technologically updated, and sustainability-oriented societies.

Investing in the modernization and sustainability of these spaces is, therefore, an investment in the progress and quality of life of the communities they serve. The advent of technology, especially from the second half of the 20th century, introduced automated cataloging systems and the computerization of collections, facilitating access to and management of information.

The increasing pace of technological change makes digital transformation necessary for the sustainability and competitiveness of organizations. Those that resist or do not embrace this process risk becoming disadvantaged in a dynamic market environment (Sebastian et al., 2020). Digital transformation optimizes processes, improves operational efficiency, and opens new opportunities for innovation, enhanced

customer experiences, and adaptation to market demands. Institutions that overlook this aspect may become outdated, losing efficiency and the ability to remain relevant in an increasingly digitalized and technology-driven business environment (Sebastian et al., 2020).

Currently, archives, documentation centers, museums, and libraries incorporate digital technologies, offering access to online resources such as learning centers, and providing a dynamic environment for research and education. In this context, information professionals must promote sustainable practices, ensuring that access to information and the use of digital technologies are also aligned with environmental preservation goals.

In this way, this article addresses the importance of these dynamic centers of knowledge, education and culture, highlighting their role in promoting digital transformation and sustainability. It analyzes how the convergence of these fields offers unique opportunities to address environmental challenges. The objective of the study is to investigate the role of information professionals at this intersection, exploring sustainable practices and innovations to confront environmental challenges.

Digital Transformation and Sustainability

Digital transformation has had significant impacts on various areas of society, including environmental sustainability. The convergence of these two fields opens new possibilities for addressing environmental challenges and seeking innovative and sustainable solutions. In this context, Inácio, Rolim, and Serralvo (2022) highlight the transformation process, which comprised three phases related to digital transformation:

> Kurt Lewin, a researcher at the Massachusetts Institute of Technology (MIT), in 1947, presented the change process as being composed of three phases: unfreezing the present state, moving to the new level and consolidation at this new level. The first phase corresponds to the necessary disposition for change to occur, it means discovering a problem and taking action. The second phase involves really wanting to make the change even if the process is arduous and difficult. The third and final phase concerns the

> acceptability of the change. These three phases become very present in the analysis of DT, especially when the organizational culture has difficulties and even blocks in accepting innovation or change (Inácio et al., 2022, p.2, our translation).

It is evident that achieving digital transformation requires an understanding of the current landscape, demonstrating availability, perseverance, and openness to change. According to Verhoef et al. (2021), digital transformation encompasses three stages: digitization, digitalization, and digital transformation. Although the terms "digitization" and "digitalization" are often used interchangeably, they have distinct meanings in the context of digital transformation and document preservation.

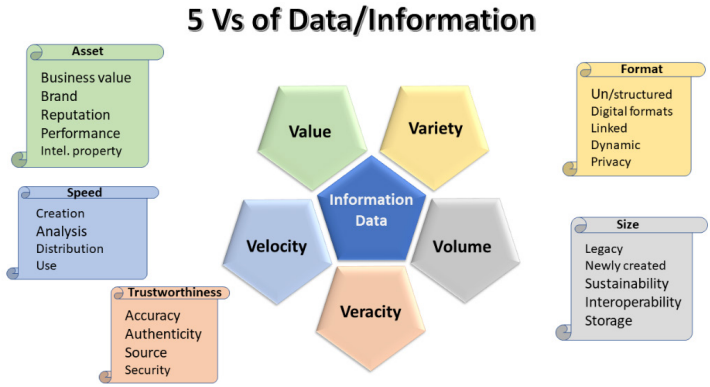
Digitization refers to the specific process of converting analog information, such as paper documents or physical images, into a digital format. This procedure is carried out using a scanner or other capture devices, converting the information into binary data that is understandable by digital systems. "[...] we define digitization to describe the action to convert analog information into digital information. [...]" (Verhoef et al., 2021, p.891).

On the other hand, digitalization involves incorporating digital technologies into various aspects of an operation or process to enhance efficiency, automation, and accessibility. While digitization is a specific step in the transition to digital format, digitalization entails a broader transformation, encompassing the integration of digital systems into everyday practices to promote a more modern and effective approach. As Savic (2021) states, "Digital transformation is about doing things differently — creating a completely new business model by using modern information and computer technologies." This process includes essential elements such as digital resources, organizational structure, growth strategy, metrics, and objectives (Verhoef et al., 2021).

Savic (2021) addresses the topic of "Digital Assets" and highlights the extensive impact of digital transformation on all five characteristics of these assets. The change is reflected in the increase in the quantity of digital products, the expansion of their volume, the evolution of their

accuracy, the acceleration of their speed, and the alteration of their value (Savic, 2021).

Figura 1: 5 Vs do Big Data. *Source:* Savić (2021).



Digital transformation is, therefore, influencing various aspects related to digital assets, from their quantity to their value, in a constantly evolving scenario (Savic, 2021). It is important to note that digital transformation includes considerations such as cloud computing (storing and accessing data and applications over the internet, on remote servers, offering flexibility and scalability), artificial intelligence (using algorithms to simulate human intelligence, automating tasks, learning from data, and making decisions) (Sawaya, 1999), big data (processing and analyzing massive data sets to extract insights, identify patterns, and inform strategic decisions), the Internet of Things (connecting devices to the internet, enabling data exchange and remote control, and expanding the interconnection between objects and environments), and virtual reality (creating immersive virtual environments through computational technologies, providing realistic sensory experiences) (Sawaya, 1999), among others. These elements in digital transformation represent technological advancements that impact interaction, information processing, and activity management across various sectors.

When considering the perspective of sustainability, the term, which originated in the 1980s, gained prominence following the report "Our

Common Future," led by Gro Harlem Brundtland (Comissão Mundial Sobre Meio Ambiente e Desenvolvimento - CMMAD, 1988). In this context, sustainability is defined as "[...] meeting the needs of the present without compromising the ability of future generations to meet their own needs [...]" (CMMAD, 1988, p.46).

According to the Brundtland Report (CMMAD, 1988), sustainable development is "[...] a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both present and future potential, in order to meet human needs and aspirations" (CMMAD, 1988, p.49).

Since then, the concept has evolved and been widely adopted across different sectors, including business. "In recent years, the theme of sustainability has become a central topic for humanity, aiming to foster healthy and conscious relationships between humans and the environment and, consequently, to ensure quality of life for future generations" (Geraldo & Pinto, 2019, p.6). The application of sustainability in businesses occurs through the incorporation of practices and strategies that aim to balance economic, social, and environmental considerations. "Governments around the world are called upon to formulate legislation, public policies, and development models that allow progress in the present without compromising the future of the planet" (Souto & Pizzol, 2019, p.3). Initially, environmental concerns predominated, leading to the implementation of measures for waste reduction, energy efficiency, and minimization of environmental impact.

As awareness of corporate social responsibility has grown, companies have begun to address environmental and social concerns. Corporate sustainability now includes practices such as social responsibility, diversity and inclusion, ethical working conditions, and operational transparency.

Furthermore, sustainability in businesses involves developing long-term strategies that promote economic growth while considering the well-being of local communities and the global impact of operations. Transparent disclosure of sustainable practices, obtaining certifications,

and participating in global initiatives are common ways to demonstrate a company's commitment to sustainability.

Currently, corporate sustainability is considered an essential part of corporate management, as a response to social demands and a strategic approach to ensuring long-term resilience and prosperity. Sustainable companies minimize their negative impact and contribute positively to socioeconomic and environmental development.

Sustainable development, as conceived by the United Nations (UN), is a holistic approach aimed at meeting present needs without compromising the ability of future generations to meet their own demands. Officially launched in 2015, the UN's 2030 Agenda for Sustainable Development sets forth 17 Sustainable Development Goals (SDGs), addressing areas such as poverty eradication, zero hunger, health and well-being, quality education, gender equality, clean energy, and social justice (United Nations in Brazil, 2015).

The UN mobilizes international efforts, promotes partnerships, and monitors global progress towards a more equitable, inclusive, and environmentally conscious future (United Nations in Brazil, 2015). This initiative represents a collective commitment to addressing the complex and interconnected challenges humanity faces, establishing a sustainable path for global development (United Nations in Brazil, 2015).

Research methods and objectives

Thus, the article examines the significance of these dynamic centers of knowledge, education, and culture, emphasizing their role in advancing digital transformation and sustainability, and analyzing how the convergence of these fields presents unique opportunities to address environmental challenges. The study seeks to investigate the role of the information professional at this intersection, exploring sustainable practices and innovations to tackle environmental issues.

In this context, the question arises: How can the information professional harness the intersection of digital transformation and

sustainability to foster sustainable practices, ensuring access to relevant information and the prudent use of digital technologies in support of environmental preservation? To address this question, a literature review was conducted through a bibliographic survey on the CAPES Journal Portal, along with consultations in specialized manuals and dictionaries on the proposed topic. The CAPES portal was selected due to its extensive virtual scientific collection, which includes content from Brazil, international publishers, and national research and educational institutions. It encompasses over 50,000 journals and 455 databases, making it a prestigious national repository with diverse and high-quality content.

For the theoretical foundation, only peer-reviewed scientific articles, available in open access from 2018 to 2023, in English, Spanish, and Portuguese, were utilized. The initial search with the terms "digital transformation" and "environmental sustainability" identified 31 articles. The phrases "transformação digital" and "sustentabilidade ambiental" yielded only four articles, and no articles were found with the terms "transformação digital" and "sustentabilidade ambiental" and "profissional da informação," nor "digital transformation" and "environmental sustainability" and "information professional." Despite these search limitations, including database use, time frame, language, and access type, the results indicate a need to further explore the role of the information professional in promoting sustainable practices, ensuring access to relevant information, and advocating the prudent use of digital technologies to effectively contribute to environmental preservation.

The selected articles were used critically, contributing to the development of the theoretical framework, underpinning the study, or providing pertinent comparisons to enhance the discussion and conclusions.

The Information Professional in the Digital Age: Sustainable Practices

In the Digital Era, the role of the Information Professional is essential, characterized as an individual with specific training to handle data, information, and knowledge, as well as to mediate these elements

(Valentim, 2004). In this context, it is necessary for the information professional to adopt an investigative and critical stance, allowing for a natural adaptation to contemporary dynamics (Valentim, 2004).

Archives, documentation centers, museums, and libraries, traditionally considered guardians of knowledge, have evolved into agents of change, promoting both digital transformation and sustainability. The constant renewal of collections represents a dynamic approach to meeting the evolving demands of clients. No longer limited to printed volumes, these institutions now incorporate digital resources, e-books, and online databases, providing instant access to diverse information.

> The information professional is faced with the Big Data phenomenon, and this scenario is characterized by extremely dense volumes of data that require skills, abilities and tools so that this information can be found; for this to be possible, it needs to be treated, analyzed and made available in a timely manner. (Coneglian et al., 2017, p.132, our translation).

The adoption of new technologies is fundamental in the modernization process. Digital management systems, online catalogs, and interactive platforms provide a more efficient and accessible experience for clients. Additionally, the implementation of automation technologies streamlines internal processes, allowing institutions to better meet the needs of their users.

Thus, archives, documentation centers, museums, and libraries adapt by providing customized spaces and encouraging interaction between clients and information. Managers focus on planned acquisitions to meet demands and optimize resources. Understanding informational trends is essential for adapting to changes in information mediation with clients (Valentim, 2016). Innovative management emphasizes that innovation should not be an isolated goal but a means to achieve concrete objectives, taking into account the institutional, sociocultural, technological, legal, and economic contexts of the library (Marcial, 2016).

Modernization enhances operational efficiency and positively influences the attraction of investors and readers. Investing in innovative technologies makes archives, documentation centers, museums, and libraries more appealing to those seeking dynamic and up-to-date environments. The provision of digital services, such as online lending platforms, virtual reading rooms, and interactive resources, contributes to reader retention and the attraction of new audiences.

The influence of modernization extends beyond the internal realm of archives, documentation centers, museums, and libraries, impacting the community in which they are situated. These spaces become catalysts for education, culture, and sustainable development, fostering the creation of more informed, technologically updated, and environmentally committed societies.

In this context, it is essential for the information professional to maintain a posture of continuous learning, remaining vigilant to the social, cultural, and technological transformations that permeate contemporary society (Valentim, 2019). By understanding new perspectives and informational trends, the information professional becomes an active agent in information mediation, effectively responding to the needs of diverse audiences (Valentim, 2019).

In implementing sustainable digital transformation in informational environments such as archives, documentation centers, museums, and libraries, it is advisable to adopt a comprehensive approach. Based on the readings conducted in this investigation, it is understood that among the suggested strategies, the following stand out: Digitization and Process Digitalization; Awareness; Training; Monitoring and Evaluation; Networking Participation; and Continuous Updating. These integrated actions form a foundation for the effective introduction of sustainable digital transformation, enhancing the role of these spaces in the digital era.

- **Digitization and Process Digitalization**

Digitization and digitalization of processes are essential in the transition from traditional practices to more efficient and sustainable operating environments. Digitization, specifically, refers to the conversion of physical documents to digital formats, while digitalization involves the comprehensive incorporation of digital technologies. Both processes contribute to more agile and accessible information management, promoting operational efficiency and sustainability.

By adopting digitization, institutions reduce dependence on physical resources, such as paper, and optimize the use of space, resulting in more sustainable operations. Furthermore, the rapid retrieval and sharing of information is facilitated, accelerating decision-making and improving internal communication. Reducing the consumption of physical resources aligns organizational practices with environmental concerns, generating substantial savings in the long term.

- **Awareness**

The awareness strategy in the digital era focuses on leveraging digital platforms as powerful tools to expand the reach and impact of campaigns on environmental issues. By using social media, websites, blogs and other online platforms, it is possible to reach a wider and more diverse audience, transcending geographic and demographic barriers. The dissemination of relevant information about sustainable practices becomes more effective, taking advantage of the ability to instantly share and go viral provided by the digital environment.

The use of digital platforms to raise awareness is not limited to just disseminating information. These tools allow the creation of interactive campaigns, such as quizzes, educational videos, polls and challenges, involving the audience in a participatory and engaging way. Online dialogue facilitates the exchange of ideas, experiences and knowledge, creating a virtual community committed to sustainable practices.

Furthermore, constant monitoring of interactions on digital platforms allows you to evaluate the impact of campaigns in real time, adapting strategies as necessary and ensuring a more efficient and targeted approach.

- **Training**

Approaching capacity building at the intersection of digital transformation and sustainability is essential to creating a solid foundation of awareness and engagement. The creation of educational and training programs aims to provide knowledge and skills for both users, employees and the community in general. The main focus is to increase understanding of the importance of sustainability, highlighting practices that promote environmental preservation and the responsible use of technology.

For users, educational programs may include workshops, online tutorials and educational materials that address specific issues such as reducing the digital carbon footprint, consciously using electronic devices and promoting sustainable habits when using digital resources. In the case of employees, training can focus on sustainable practices in the digital workplace, encouraging operational efficiency and the incorporation of eco-efficient habits into daily professional life.

- **Monitoring and Evaluation**

The implementation of monitoring and evaluation systems is a step in the convergence between digital transformation and sustainability. These systems are designed to track and analyze the environmental impact of digital practices in any organizational context. The aim is to provide tangible data that allows for an accurate assessment of environmental performance and to identify specific areas for continuous improvement.

Environmental performance indicators can include metrics such as energy consumption, carbon emissions, digital waste management and efficiency in the use of technological resources. The implementation of real-time monitoring tools allows for dynamic analysis, enabling a quick

response to events or practices that may negatively impact the environment. Additionally, these tools can be integrated into reporting systems to provide clear and understandable information about the sustainable state of digital operations.

Identifying opportunities for continuous improvement is essential for adjusting policies, processes and technologies, aiming to minimize environmental impact and constantly improve sustainable digital practices. By establishing these systems, archives, documentation centers, museums and libraries can demonstrate an effective commitment to sustainability and contribute to the construction of a more responsible and eco-efficient digital environment.

- **Network Participation**

Network participation is an essential strategy to promote sustainable practices within the scope of digital transformation. Actively engaging in networks and initiatives focused on sustainability allows archives, documentation centers, museums and libraries to share knowledge, experiences and best practices with other institutions, expanding positive impact on the global stage.

Furthermore, collaboration in networks facilitates the exchange of information about green technologies, energy efficiency strategies and methods for reducing environmental impact. Active participation in networks also creates an enabling environment for the joint development of sustainable solutions and the promotion of common standards and guidelines. This collaboration can result in the creation of shared initiatives such as standardized environmental monitoring tools, development of sustainable educational resources, and joint awareness campaigns.

- **Continuing Education**

The pursuit of continuous updating is a fundamental practice for information professionals (Targino, 2000) who seek to operate effectively at the intersection of digital transformation and sustainability. Given

the rapid evolution of these dynamic fields, staying informed about the latest trends, technologies, and sustainable practices is essential to ensure relevance and efficiency in their activities.

Participating in courses, workshops, and specialized events provides valuable opportunities to acquire new knowledge, enhance technical skills, and develop a deeper understanding of the ethical and environmental implications of digital transformation. These learning experiences offer a conducive environment for idea exchange and networking, connecting professionals with experts and peers in related fields.

Continuing education strengthens the knowledge base of information professionals and equips them to implement innovative and sustainable practices in their work environment. Continuous awareness of changes in technological and environmental landscapes enables professionals to stay ahead of emerging challenges, contributing proactively to the advancement of their institutions and the creation of a more sustainable and informed future. According to Savic (2021), information managers and library staff will face significant impacts, requiring a multifaceted approach and the development of various competencies. The necessary skills include:

Digital literacy or technical knowledge

Full engagement

Dealing with information and cognitive overload

Flexibility and adaptability

Lifelong microlearning and personal development

Emotional intelligence and social skills

Cultural and other diversity

Transdisciplinary approach

Mobile force and remote work

Understanding of the generation gap

High-level digital ethics

In conclusion, the implementation of sustainable digital transformation in informational environments requires a multifaceted and integrative approach. The strategies discussed form the foundation for an effective transition to more eco-efficient and innovative practices in archives, documentation centers, museums, and libraries. By coordinating these actions, these institutions align with sustainability principles and position themselves as leaders in promoting a conscious digital future committed to environmental preservation. Through these practices, informational environments strengthen their relevance in the digital age, ensuring the continuity of their educational and cultural mission while actively contributing to a more sustainable and responsible development.

Integration of Sustainable Development Goals in the Digital Transformation of Informational Environments

The Sustainable Development Goals (SDGs) were established through a global consultation process involving governments, civil society, experts, and the private sector, aiming to create a universal set of targets addressing the most pressing challenges faced by humanity, including poverty eradication, promotion of quality education, reduction of inequalities, and climate action.

In the convergence of digital transformation and sustainability within archives, documentation centers, museums, and libraries, it is possible to enhance these efforts by integrating the Sustainable Development Goals (SDGs) established by the UN. This synergy strengthens local practices and contributes to global targets. Below are some particularly relevant SDGs that can be implemented in this context:

- **SDG 4 - Quality Education:**

Implement digital solutions to improve the accessibility and quality of education, making educational resources more available and sustainable. In this scenario, the implementation of digital solutions emerges as a strategy to improve the accessibility and quality of education. The

digitalization of educational resources increases the availability of these materials, and promotes sustainability by reducing the need to consume physical resources, such as paper.

- **SDG 9 - Industry, Innovation and Infrastructure:**

Adopt innovative technologies to improve operational efficiency, including the digitization of collections and the implementation of effective information systems. The implementation of effective information systems contributes to more efficient management of resources, facilitating the management of data, loans, reserves and other services, promoting innovation

- **SDG 11 - Sustainable Cities and Communities:**

Promote digital and virtual platforms to guarantee access to information in diverse communities, reducing the need for physical travel and contributing to urban sustainability. This transformation increases accessibility to information and reduces the environmental impact associated with transport.

- **SDG 12 - Responsible Consumption and Production:**

Adopt sustainable digital resource management practices, reducing consumption of paper, energy and other physical resources, while promoting a more conscious approach. By adopting innovative technologies and digital strategies, archives, documentation centers, museums and libraries can minimize dependence on physical materials such as paper and reduce energy consumption associated with traditional processes.

The relationship between users and bibliographic materials in libraries often reflects a lack of understanding about the management of these resources. Many users may not be aware of how to handle materials that are not of interest to them, mistakenly assuming that libraries store

all types of materials indefinitely. Given this scenario, it is important to promote greater awareness about the proper disposal of these materials.

Clients often turn to libraries for advice on how to properly discard or recycle unwanted bibliographic materials. To meet this demand and promote sustainable practices, it is beneficial for libraries to establish partnerships with recycling companies. In this way, they contribute to the correct disposal of these materials and strengthen their environmental responsibility. These partnerships provide an efficient solution for proper disposal, aligning with sustainability principles and promoting a conscious approach to bibliographic resources.

- **SDG 13 - Climate Action:**

Implement measures to reduce the carbon footprint of library operations, such as energy efficiency in digital systems and promoting eco-efficient initiatives. Energy efficiency in digital systems, for example, involves using technological resources in an optimized way, reducing unnecessary energy consumption. Furthermore, the promotion of sustainable initiatives in the digital sphere, such as the use of efficient servers and the choice of eco-conscious platforms, are strategies that contribute to action against global climate change.

- **SDG 17 - Partnerships for the Goals:**

Establish collaborative partnerships between archives, documentation centers, museums and libraries, educational institutions and companies to promote sustainable practices and share digital resources. This collaborative approach allows for the exchange of knowledge, experiences and best practices in the field of digital sustainability. These partnerships are essential to achieving the objectives of digital sustainability, benefiting society as a whole.

Furthermore, the constant evolution of social demands requires in-depth reflection on the need to update curricula. The adaptation of academic programs must be directed to meet emerging needs, aiming to

train librarian professionals who are conscious, critical and prepared to face the ongoing transformations.

Introducing these innovations into curricula, although essential, presents significant challenges. It is necessary to address ethical issues, with privacy and equitable access to information as pressing priorities. In this context, ensuring a responsible transition guided by solid ethical principles and respect for individual rights is essential.

Additionally, it is essential to continue in-depth academic studies that cover the themes of digital transformation and sustainability. This practice will contribute to consolidating existing knowledge and devising and implementing new innovative initiatives.

Thus, the implementation of sustainable digital transformation in informational environments proves to be a multifaceted and integral journey. These actions enhance operational efficiency and amplify the role played by archives, documentation centers, museums, and libraries in the digital age.

The selection of Sustainable Development Goals (SDGs) addressed in this section is based on their specific relevance to the digital transformation of informational environments such as archives, documentation centers, museums, and libraries. For instance, SDG 4 stands out for promoting quality education, which can be significantly enhanced through the digitization and increased accessibility of educational resources. SDG 9 emphasizes innovation and infrastructure, which are essential for implementing technologies that improve operational efficiency and facilitate the management of digital collections. SDG 11 addresses urban sustainability, where access to information via digital platforms can reduce the need for physical travel, thus contributing to more sustainable cities.

Additionally, SDG 12, focusing on responsible consumption and production, is directly applicable to the sustainable management of digital resources, reducing paper and energy use. SDG 13, which deals with climate action, is relevant for implementing measures that lower the carbon footprint of digital operations. Finally, SDG 17 underscores the importance of partnerships and means of implementation, essential for sharing digital

resources and sustainable practices among institutions. Integrating these SDGs provides a strategic approach to align global sustainability goals with local digital transformation practices, thereby strengthening the impact of these informational environments in contemporary society.

The convergence between digital transformation and sustainability presents a unique opportunity for information professionals to play a significant role in promoting sustainable practices. Digital transformation, characterized by the adoption of advanced technologies and the digitization of processes, can be leveraged to effectively achieve sustainability goals.

Firstly, information professionals can use digital transformation to ensure access to relevant and up-to-date information on sustainable practices. By developing and managing robust and accessible information systems, they can facilitate the dissemination of knowledge that encourages the adoption of practices contributing to environmental preservation. Moreover, the digitization of documents and processes helps reduce the use of paper and other physical resources, directly contributing to sustainability.

In second place, the conscious use of digital technologies is essential for minimizing the environmental impact of digital activities. Information professionals can raise awareness about the importance of energy efficiency in data centers and the use of electronic devices, as well as about the proper management of the technology lifecycle, including responsible disposal and recycling.

Moreover, these professionals have the opportunity to lead initiatives that integrate sustainability into information governance processes. This includes developing digital preservation policies that ensure continuous access to information while also considering the environmental impact of data storage and processing practices.

Therefore, by exploring the intersection between digital transformation and sustainability, information professionals can ensure access to information and promote the conscious use of digital technologies, contributing to environmental preservation and sustainable development.

Conclusions

The integration of advanced technologies improves operational efficiency and contributes to global sustainability. It is essential that the global community adopts sustainable and digital transformation measures to optimize time and human resources, enabling more efficient conduct of daily activities. Information professionals often face an intense workload, struggling to keep up with daily tasks while dealing with increasing demands.

In this context, digital transformation appears as a promising solution by offering the automation of activities, allowing information professionals to focus on more strategic tasks. This technological evolution alleviates work overload and expands service capacity, enabling librarians to reach a greater number of users in different parts of the world.

The automation provided by digital transformation is not limited to optimizing time, but also opens doors to global accessibility. Archives, documentation centers, museums and libraries, through digitization, become available to people anywhere on the planet. This democratization of access to information is one of the outstanding benefits of the digital revolution in the field of information, promoting a wider dissemination of knowledge. In addition to optimizing processes, sustainable practices have the power to unite readers in a common cause of citizenship and environmental awareness.

Just as in other fields, information professionals must stay updated and continuously enhance their skills. Digital transformation requires ongoing training to ensure these professionals are equipped to handle emerging demands and digital innovations, guaranteeing that they can provide relevant and efficient services in an increasingly technological and globalized environment.

The convergence of digital transformation and sustainability significantly redefines the role of information professionals, promoting a more efficient and environmentally conscious approach. Digital transformation enables the automation of daily tasks, freeing up time for more strategic activities and providing greater reach for services. Integrating sustainable practices into the operations of archives, documentation centers,

museums, and libraries, aligned with the UN's Sustainable Development Goals (SDGs), reinforces the commitment to environmental responsibility.

The implementation of innovative technologies, awareness of sustainable practices, and the formation of collaborative partnerships are key elements in this convergence. The adoption of effective digital solutions, the promotion of quality education through accessible and sustainable resources, and the reduction of physical resource consumption contribute to achieving various SDGs. This integration optimizes operational efficiency and positions information professionals as change agents, leading initiatives that address current societal demands in an innovative and sustainable manner.

It is essential to consider digital inequalities when promoting sustainable practices, ensuring that digital transformation is inclusive and accessible to all segments of society. With a critical and engaged perspective, information professionals can make significant contributions to a more sustainable future, where digital technology acts as an ally in balancing development and environmental preservation.

Additionally, the continuation of academic research involving digital transformation and sustainability is essential for fostering new initiatives. Ongoing engagement in academic research in these domains is essential for developing a more comprehensive understanding of the challenges and opportunities, enabling society to advance in an informed and sustainable manner in the convergence of these fields.

Therefore, the convergence of digital transformation and sustainability redefines practices and operations in archives, documentation centers, museums, and libraries, strengthening the role of information professionals as essential facilitators in this dynamic landscape. By adopting innovative technologies, promoting sustainable practices, and establishing strategic partnerships, these professionals are aligned with current demands and leading the way toward a more efficient, accessible, and eco-conscious future. This integrated approach drives the evolution of informational environments in the digital age and significantly contributes to building more informed, educated, and sustainable societies.

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