

## **Navigating Disruptive Technological Innovation in African Libraries: The Adaptive Leadership Imperative**

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**Abstract**

The rapidly and constantly changing library and information landscape in the technology-driven era has necessitated libraries to reimagine the suitability of the leadership styles currently practiced by them. This paper offers a solution by proposing adaptive leadership in navigating disruptive technological innovation in African libraries. In achieving this purpose, typology design was adopted. This paper argues that the ever-changing world of libraries and information institutions is making them complex, requiring dynamic leadership practice designed around adaptability and flexibility to stimulate an innovative culture. Adaptive leadership will equip library leaders with the skills of anticipating the future, making data-driven decisions, and building teams that value collaboration and innovation by encouraging experimentation. Harnessing these skills will facilitate the effective deployment of disruptive innovation tools such as artificial intelligence (AI), Internet-of-Things (IoT), robotics, blockchain, augmented reality (AR) and virtual reality (VR) for library and information services. However, this can only be possible by combating problems like inadequate awareness of adaptive leadership among librarians, static library culture and inadequate technologies. This paper concludes that adaptive leadership practices hold the potential to achieve seamless integration of disruptive technological innovation in libraries. One of the recommendations of this paper is that library institutions, agencies and associations globally should train library leaders on adaptive leadership.

**Keywords:** Adaptive leadership; African libraries; Disruptive technological innovation; Innovation; Leadership; Libraries.

## **Introduction**

Libraries, like other social institutions, are bound to change as social practices evolve. The evolving social practices, if they align with the beliefs and values of the people living in a particular society, become the trends, setting new directions for people's conduct, yearnings, and aspirations. No doubt libraries have gone through different phases of development. And as development occurred, many libraries have become prominent, while some have gone into extinction. It may be puzzling that stories of libraries differ, despite the fact that they are established to serve the same

purposes. The answer is not far-fetched: Libraries that survived in the innovation-driven era did so by adjusting their procedures, processes and operations, thus responding to technological innovation.

Technological innovations, be they incremental, radical, or disruptive, have become norms in libraries as long as changes occur. These innovations are products of rapid and massive advancements in information and communication technology (ICT), forcing libraries to either adjust or entirely change their processes in meeting the changing needs of their users in order to remain relevant in society. According to Tomchick (2025), the speed of change in today's world is unprecedented. Technology is evolving, and libraries are shifting as users' expectations are constantly rising. In spite of the noticeable presence of innovations in libraries and their influences on operations of libraries, the focus of libraries on the application of disruptive innovation tools has been reportedly low (Adekoya & Adedimeji, 2021).

Disruptive technological innovation, coined by Clayton Christensen in 1997, is one of the types of innovations that focuses on causing major changes in the processes, procedures and operations of institutions. With respect to libraries, disruptive innovation has given birth to tools, apparatuses, equipment, and machines that have drastically changed the entire library processes and operations. It is important to clarify that disruptive innovation is not only a product of this era, but also of every remarkable transition that changed the library and information landscape. For instance, the use of punch cards for circulation by the International Business Machines (IBM) Corporation could be considered an example of disruptive innovation. The use of computers for indexing by H.P. Luhn is another typical example of disruptive innovation in libraries (Tsafe & Sulyman, 2022).

Some notable characteristics of disruptive innovation tools are the introduction of new processes promising to change and advance the existing ones. In spite of the potential of disruptive technological innovation tools in libraries, it has been noted that one of the reasons for their discouragement is minimal focus on adaptive leadership practices in most libraries globally. Of course, studies have reported encouraging findings on the presence of leadership and its practices

across the different continents of the world. Yet, this does not result in positive stories regarding championing and embracing disruptive innovation in libraries. This makes one wonders the reason leadership has yet to address the library personnel's capacity to cope with disruptive technological innovation; perhaps the reason is that the currently practised leadership styles are not suitable enough to meet the aspirations and visions of the library management.

Diverse social changes require different leadership approaches; this underscores why Robinson (2025) stressed that leadership is not a one-size-fits-all approach. Leadership has to evolve as events change and occasions demand. The import of this is that a leadership style that is suitable for one activity might not be suitable for another. However, in the continuously changing library landscapes, adaptive leadership promises to be suitable because of its flexibility and responsive nature to changes. Llopis (2025) stressed that leadership styles are evolving in response to the world's continuous evolution. The ways people led five years ago may have worked in the past, but in today's rapidly shifting landscape, those ways are no longer enough. What worked for leaders before would not necessarily work now because information products and services are changing at unprecedented speeds. The import of this is that, as it is apparent that industries are being marked by uncertainties in their processes, libraries are also battling with their own share of changing practices; thus, they need a new approach as they face the future.

Many questions should be answered when it comes to a library's transition into the technology-disruptive innovation: What leadership style or styles would be appropriate for the challenging library environment if "just any leadership style" is inappropriate for the disruptive technological era? When it comes to the adoption or transfer of technology, which leadership style should library leaders embrace? Would libraries benefit from having leadership strategies in place so they would not be overpowered by the difficulties presented by disruptive innovation tools? What advantages may libraries gain from using various leadership philosophies in various situations, especially when it comes to managing technological advancements?

In responding to these questions, library management and leadership scholars have recommended “adaptive leadership,” which is considered a suitable leadership approach for this era of uncertainty and continuous changes in library practices. Llopis (2025) supported this suggestion by noting that the new era in libraries marked by disruptive innovations required deeper transformations, which can only be achieved by adaptive leaders who are intentional in their actions, have clear purposes, and are willing to move from outdated practices. This is why Bala (2025) concluded that in times of uncertainty, only adaptive leaders have the power to shape outcomes, support their teams, and build cultures that endure in this disruptively innovative era.

Adaptive leadership is an evolving layer of leadership style, built on integrating flexibility and resilience to respond to the constant changes in a workplace or organization. It is gradually gaining prominence among library leaders who are updating their leadership knowledge and skills in their quest to respond to the demanding, changing nature of the library and information landscape, which poses enormous challenges to the survival of libraries. Scholars have appraised the worth of adaptive leadership in coping with unprecedented challenges. Srirahayu et al. (2020) noted that adaptive leadership is best suited for academic libraries during disruptive times. For instance, Aslam (2019) claimed that adaptive leadership is crucial for managing challenges and fostering a willingness to embrace transformation in academic libraries. Adding to scholars’ voices on the suitability of adaptive leadership for disruptive technological innovation in libraries necessitates structuring this paper to enlighten library managers and leaders on the importance of adaptive leadership in navigating disruptive technological innovation in African libraries.

### **Justification for the Study**

The roles of leaders in the contemporary library landscape cannot be overemphasized. This is because libraries have been and will always need library leaders who will positively influence other library personnel by articulating visions as well as inspiring and motivating them to rise to the ever-demanding standards of their profession. As important as the roles of leadership are, it has been discovered that different contexts require different leadership styles. The need for more

robust knowledge of leadership styles and their applicability among librarians has become more evident in this era, shaped by rapid innovations, which are reshaping how libraries operate and deliver information to users (Bhakte, 2022; Robinson, 2025).

In the evolving library and information landscape, rapid, constant, and disruptive change is now the norm, and what succeeded in the past is no longer a guide to what will succeed in the future (Ibarra & Scoular, 2019). Practically, the current technological deluge has created vacuums for adaptive leaders. The reason for the need for this crop of leaders is because of their possession of specific skills such as agility, forward-thinking, and willingness to evolve with the changes disruptive innovations ushered in libraries (Tomchick, 2025). Adaptive leaders can learn how to adapt to constantly changing environments in ways that unleash fresh energy, innovation, and commitment (Ibarra & Scoular, 2019). Expanding the acceptance of adaptive leadership as a panacea for coping with disruptive innovation in libraries underscores why this paper will be enlightening library managers and leaders on the importance of adaptive leadership in navigating disruptive technological innovation in African libraries.

### **Purpose of the Paper**

The main purpose of this paper is to advocate for the importance of adaptive leadership in navigating disruptive innovation in their libraries. Specifically, this study attempts to clarify adaptive leadership in the library context, respond to the question of whether prior library leaders were adaptive, explain the qualities of adaptive library leaders, justify why adaptive leadership is imperative in contemporary libraries, highlight some disruptively innovative services pioneered by adaptive library leaders and discuss the hindrances to African adaptive library leaders' stimulation of disruptive innovation.

### **Methodology**

This paper adopts a typology design to review the available literature on adaptive leadership and disruptive innovation in libraries. Typology design refers to the systematic classification of cases,

concepts, or phenomena into distinct categories or “types” based on shared attributes or characteristics. This approach is used to organize, compare, and analyze data by grouping similar cases, which can help clarify similarities and differences, identify patterns, and provide a comprehensive inventory of possible cases (Jaakkola, 2020). Thus, the typology design helps this paper to provide succinct descriptions of adaptive library leaders logically; illuminate the illusions surrounding the adaptive nature of the previous library leaders; appraise the qualities of adaptive library leaders; espouse the need for adaptive leadership in the evolving library and information landscapes; explain some disruptively innovative services pioneered by adaptive library leaders and emphasise the hindrances to African adaptive library leaders' stimulation of disruptive innovation.

### **What it Means to be Adaptive Library Leaders**

The growing rates of technological advancements in information products and the tools used by libraries to manage them have created gaps for librarians who are not only the heads in their libraries, but are also skilled in inspiring the library personnel to embrace the evolving trends and face the future of library and information services with optimism. As libraries and other information agencies continue to expand their role as a vital resource within a community, academic institution, or business entity, prospective library employees must develop a balanced array of competencies such as adaptability and leadership skills (Trembach, 2024).

Adaptive leadership is a vital tool for sustainable transformation, empowering librarians and organizations to not only adapt to change but thrive within it (Llopis, 2025). As libraries and information institutions face a fast and high pace of changes in their operations and processes, caused by the world’s ever-complex and interconnected dynamics, library leaders who don’t let go of outdated approaches risk falling behind and consequently not being able to meet the evolving needs of their institutions and users. Adaptive leadership in libraries involves recognizing libraries as complex adaptive systems, where leaders guide adaptation through innovation, contextual awareness, and empowering staff.

In the evolving library world, adaptive leaders have the potential to transform libraries by deploying their adaptability and resilience to respond to changes and enhance library productivity (Tsafe, Ajani & Sulyman, 2022). This is because adaptive leadership is flexible and responsive to changing circumstances, particularly in the context of technological advancements and pandemics (Kunene & Mapulanga, 2021). Adaptive library leaders tend to be flexible in planning, develop a forecasting system and effective operational management to navigate changes in internal and external conditions, ensuring sustainable innovative development within the library industry (Bachynska, 2024). Adaptive leaders foster creativity and responsiveness to changing environments, enhancing overall library effectiveness and success (Freeburg, 2020).

Osuigwe (2020) stressed that adaptive library leaders are visionaries and offer strategic guidance to navigate rapid changes, such as technological advances and demographic shifts. These leaders embraced self-development, disruptive thinking, and social capital to effectively lead and innovate in information access by combining flexibility and innovation in response to changing environments (Weiner, 2017). Lewis (2022) acknowledged the importance of adaptive leadership skills in libraries, noting that it deploys agility to encourage collaboration, user-centered planning, and the ability to learn from mistakes, which are essential for coping with technological transformations. Libraries led by adaptive leaders are more likely to innovate, remain competitive, and withstand economic and technological shifts (Tomchick, 2025).

In a world where librarians are interested in making meaning out of what they do, adaptive leadership promises to offer this by providing meaning and communicating a vision, a big picture, an optimistic look at the future (Schwantes, 2025). Adaptive leadership in libraries involves realigning ambitions to uncertain environments, focusing on digitisation, sustainability, and transformative services. In a post-COVID-19 landscape, library leaders must embrace change, enhance communication, and build resilience within teams to navigate challenges and ensure long-term viability (Shaghaei et al., 2022).

### **Are African Library Leaders Not Adaptive?**

Every step toward changing the ways and patterns of delivering library services holds some elements of service disruptions. And as it has been documented that leaders have been positively responding to changes brought into libraries across the world by technological inventions, it could be submitted that library leaders have been adaptive since the beginning of library innovations. However, since the concept of adaptive leadership was coined in 1994 by Marty Linsky and Ronald Heifetz, it could be argued that the leaders who responded to the early innovations in libraries have been adaptive. It was challenging to contextualise the librarians' leadership style, despite the fact that they demonstrated adaptive leadership by making difficult choices to incorporate technology into libraries.

But now that adaptive leadership is becoming renowned in leadership literature, it becomes imperative to address its crucial role in coping with disruptive innovations. Literature has been filled with different library leaders whose adaptability transformed and sustained libraries in different eras. For instance, one of these researchers was privileged to work with an adaptive library leader in a Nigerian university. It was found that the users – academics, non-academics, and students – were reluctant to patronize the library for their information needs. Their major excuse was that the “library’s users’ registration process is stressful and they questioned why they would be visiting the library when they can be using the Internet to search for all the information they need.” Upon discovering this, the adaptive leader formed a team, instilled the culture of collaboration and challenged them to develop software that could complete user registration within a minute, which turned the library patronage around massively.

To address the issue of users’ reliance on the Internet as their reliable source of information, the adaptive leader set up another team and named the librarians in the team “social media librarians.” Social media pages and groups were created on Facebook, WhatsApp, and Telegram to serve as platforms for providing information to users without struggling to visit websites. The major responsibilities of the team were compiling information from websites of different newspapers and media houses and disseminating it to the users. Traditionally, these activities fell within the frames

of selective dissemination of information (SDI), document delivery services (DDS), current awareness services (CAS), and clippings. These were enhanced by integrating social media with information delivery, thus adapting to the changing patterns of seeking and accessing information by users. To crown it all, the adaptive leader introduced an institutional repository for documentation of information resources emanating from the university. These innovative services have been driving the research engagements and outputs of academics in the university.

### **Qualities of Adaptive Library Leaders**

Adaptive leadership is not just a skill; it is a critical mindset for long-term success in today's evolving library world. The ability to embrace uncertainty, leverage change, and continuous learning will define the most successful library leaders of the future (Tomchick, 2025). In describing the adaptive leaders needed in libraries, Olarongbe et al. (2023) asserted that adaptive leadership in libraries involves being flexible and responsive to change, allowing librarians to navigate evolving challenges. This leadership is essential for driving innovation and ensuring libraries remain relevant in the 21<sup>st</sup> Century by deploying their abilities to manage challenges and promote resilience within library and information institutions (Trembach, 2023).

Adaptive leaders are unique in nature based on some qualities, including anticipating changes, building teams that are comfortable with changes, making data-driven decisions and fostering a culture of innovation where experimentations are encouraged. Regarding the quality of anticipating changes, Tomchick (2025) noted that adaptive library leaders are flexible, based on their adaptive mindset, mentally resilient and open to continuous learning so that they can thrive in the constant and rapidly technology-driven library and information landscape. Adaptive library leaders do understand that problems often arise without clear solutions and that success comes from their ability to pivot, experiment, and innovate when necessary.

Furthermore, adaptive library leaders tend to build teams that are comfortable with changes. This is achievable by prioritizing teamwork and open dialogue. Adaptive library leaders encourage

input from others and create an inclusive environment where team members feel heard and valued. Furthermore, adaptive library leadership emphasised involvement, requiring library leaders to move from the sidelines onto the playing field; from disengaged observers to active participants (Schwantes, 2025). Adaptive library leaders do not underestimate the power of their team, purpose, and capacity to sustain the work ahead in order to overcome the burdens accompanying the disruptively changing times (Bala, 2025).

Moreso, adaptive library leaders prioritize their people, strengthen resilience, and continue building inclusive workplaces that stand the test of time (Bala, 2025). Adaptive leadership in libraries involves shifting the role of leaders from traditional direction-giving to orchestrating change collaboratively with teams. It emphasizes building a culture and structure that supports adaptive changes, enabling librarians to effectively manage challenges and design change strategies (Wong, 2018).

It is also worth noting that data always plays a key role in every decision of adaptive library leaders. Weiner (2017) stressed that adaptive leadership in libraries involves evidence-based decision-making and the ability to navigate change effectively. Adaptive leaders navigate ambiguity, encourage experimentation, and develop strategies that align with the library's evolving role within the academic institution. Adaptive library leaders do this by fostering collaboration, redesigning policies, and maintaining a keen interest in emerging trends (Aslam, 2021).

Ultimately, adaptive library leaders are known for fostering a culture of innovation where experimentations are encouraged. Adaptive library leadership involves the ability to remain flexible, make real-time adjustments, and navigate uncertainty with confidence. It's about learning from failures, staying open to new ideas, and leading with agility in the face of disruption (Tomchick, 2025). Adaptable library leaders are fond of demonstrating empathy and creating a sense of direction even when outcomes aren't fully clear. This makes them turn uncertainty into an opportunity to foster stability (Bala, 2025). Adaptive leadership in libraries involves fostering an environment that encourages experimentation, promotes trust, and supports learning. It

empowers librarians to innovate and respond effectively to change, enhancing organizational resilience and relevance in the face of challenges (Parker, 2012).

### **Why is Adaptive Leadership Necessary Among Leaders of Contemporary African Libraries?**

The concept of leadership remains complex and multifaceted, with scholars offering diverse definitions and perspectives. Leadership has continued to grow as leadership studies have evolved. A commonly accepted definition of leadership is that it involves a process through which an individual influences a group toward the achievement of common goals (Northouse, 2022). Leadership has been conceptualized in various ways – as a set of behaviours, a power dynamic, a transformational influence, or a strategic process. In a nutshell, leadership is about infecting others with positive energy, awakening their interest toward a cause and driving them toward achieving a set cause or goal.

Oyelude and Oladele (2014) bemoaned that elder library professionals—many of whom are still highly visible in the upper ranks of libraries—show a variety of attitudes towards the deployment and usage of ICTs in their establishments. It was found that some library administrators and older professionals reacted somewhat unfavorably to changes in the technology utilised in their libraries, which hindered the younger professionals' ability to function to the best of their abilities and usually showed indifference to new technologies. Interestingly, recent studies demonstrate that transformational leadership combined with emotional intelligence accounts for 53% of the performance of library personnel in implementing technology-driven library service (Omoniyi & Adetoro, 2023). Currently, studies have reported the practices of democratic, autocratic, transformational, transactional, and laissez-faire styles by library leaders (Oguntuase et al., 2024). A notable deficiency of these leadership styles is their failure to address leadership presence in the era of continuous technological changes.

Good and innovative library leadership is important to keep the library relevant (Akanbiemu, 2017). Continuous changes have become increasingly complex and the methods of leading through them have failed to keep pace. If it is assumed that leadership matters that it has a legitimate effect on the outcome of a crisis, then leaders have a duty to respond to that adaptation with modifications of their own (Smith, 2019). Satgoor (2015) emphasised that the importance of developing leaders within the library and information services (LIS) sector has never been as crucial as it is today. There is a critical need to develop the next generation of library leaders who can respond and adapt LIS to the needs and demands of community development imperatives, emerging technologies for access to information and knowledge, and most importantly, recognise its ability to impact the intellectual capital of the society.

Sulyman et al. (2023) stressed that the emerging library services have called for rethinking the roles of leadership on library operations, with a focus on enhancing flexible and fluid processes aimed at boosting creativity, driving innovations and achieving significant changes across various components of a library system. Adaptive leadership is a useful framework for leadership practitioners (Seibel et al., 2023). The adaptive leadership model provides leaders with a unique perspective on how to motivate, mobilize and engage individuals to respond positively to change in a variety of contexts, particularly when traditional change models fall short in addressing the human side of change that so often leads to failed change processes (Arthur-Mensah & Zimmerman, 2017).

The need for adequate leadership styles and behaviours in the bid to adapt effectively to new technologies in African libraries has called for advocating for the practice of adaptive leadership among library leaders (Oyelude & Oladele, 2014). Westover (2024) stressed the need for adaptive leadership as a catalyst for sustainable innovative development, which could be applicable to libraries in Nigeria facing myriad challenges. Adaptive leadership practice would help Nigerian libraries respond to community development, emerging technologies, and intellectual capital, moving beyond traditional managerialism to foster innovation and dynamic organizational cultures

(Satgoor, 2015). Westover (2024) emphasised that adaptive leadership is suitable for library leadership striving to thrive in uncertain times. This leadership practice allows library leaders to build strong workplace cultures and empower teams through strengths-based development and effective communication. The use of adaptive management methods meets the practical tasks of sustainable innovative development of the library industry and can be used in the library management tools for its implementation (Bachynska et al., 2024).

### **Disruptively Innovative Services Pioneered by Adaptive Library Leaders**

The library and information landscapes have been transformed since the turn of the 21<sup>st</sup> Century. This made some LIS management and leadership scholars argue that only libraries led by leaders who are open to change by exploring the opportunities of technological advancements will remain relevant in the highly competitive and ever-evolving information world. The library leaders who will thrive in the 21<sup>st</sup> Century must be adept at engaging with staff, training them for the evolving and changing needs of their jobs and fostering an environment conducive to embracing new technologies for effective ICT adaptation (Oyelude & Oladele, 2014).

ICT and its emerging variants constitute the major elements disrupting the processes, operations and services of libraries and information institutions. According to Patil (2024), ICT serves as a disruptive innovation in libraries, transforming them from traditional book repositories to dynamic digital environments, enhancing user experiences, and integrating technologies like IoT, VR, AR, and AI. Histories have reported that libraries evolved and transformed during trying times. This also happened during the COVID-19 pandemic, where libraries were transformed into learning hubs by integrating virtual learning technologies like Zoom and Moodle, enabling academic libraries to function as virtual spaces (Ajibade & Mutula, 2021).

Adaptive library leaders position libraries to swiftly embrace changes. Fostering an adaptive leadership culture in libraries can enhance librarians' acceptance of AI technologies, ultimately improving the integration of AI within the evolving landscape of higher education. The

implementation of AI in academic libraries is most likely to occur under transformational or adaptive leadership (Shal et al., 2024). Disruptively innovative services, adaptive library leaders are currently grappling with encompassing AI for personalized learning, AR/VR for immersive experiences, blockchain for secure transactions, robotics for automation, and IoT for smart resource management. All these are transforming libraries into dynamic hubs of innovation and learning (Din & Ali, 2024).

### **Hindrances to African Adaptive Library Leaders' Stimulation of Disruptive Innovation**

Leadership practices constitute an integral part of contemporary library and information practices. However, it has been observed that libraries and their associated information provision institutions have not prioritised the practices of leadership generally, let alone deploying adaptive leadership. Many reasons, including inadequate awareness of adaptive leadership, cultural barriers, organisation culture, inadequate technological infrastructure and ethical issues, have been found for this non-encouraging adoption of adaptive leadership.

Starting with the inadequate awareness of adaptive leadership, generally, library heads who ought to have transitioned to leaders are comfortable being managers. This fixed mindset limits them from learning about leadership, its styles, and approaches, which can be deployed in different situations. The library managers' fixed orientations about traditional leadership have been limiting them from switching to evolving and trending leadership styles such as adaptive leadership, which is being deployed by library leaders, whose results in the adoption of disruptive innovations are encouraging. Library culture is another challenge hindering adaptive library leaders' stimulation of disruptive innovations. Leaders of libraries without an innovative culture will find it difficult to entrench disruptive innovations in their library operations and services. In situations where the adaptive leaders, in the quest of fulfilling the demands of their jobs, strive to change the practices of their libraries by encouraging their personnel to innovate, such a call would be met with reactance because most of the library personnel would have been accustomed to the old ways of performing their tasks and duties.

Another significant challenge to adaptive library leaders' stimulation of disruptive innovation is inadequate technological infrastructure. Oftentimes, it has been found that librarians are ready to transition from the old ways to the emerging practices. However, their urge was always stemmed because the technological tools needed by them for smooth and effective transitioning are not available. Problems such as poor power supply, poor Internet bandwidth and outdated software/hardware can hamper adaptive leaders' seamless transition to disruptively innovative library services.

### **Conclusion**

The constantly and rapidly changing technologies used in the collection, provision and delivery of library and information services have caused library leaders to assess their leadership approaches and reinvent them to remain relevant in the disruptively innovative library scenes. This paper has brought into fore that adaptive leadership practices hold the potential to seamless integration of disruptive innovation in libraries. By combining the qualities of anticipating changes, building teams that are comfortable with changes, making data-driven decisions and fostering a culture of innovation, adaptive library leaders would be able to expediently deploy AI, blockchain, library management system (LMS), integrated library management system (ILMS), IoT, robotics and other emerging technologies for library operations and services. Nonetheless, African library leaders faced difficulties like inadequate awareness of adaptive leadership, organisational culture and inadequate technological infrastructure in their quest to transition to services offered by disruptive innovations.

## **Recommendations**

Based on the findings, this paper recommends:

1. Library institutions, agencies, and associations in Africa should design structured training programs to equip library leaders with adaptive leadership skills such as flexibility, resilience, data-driven decision-making, and collaborative problem-solving.
2. African libraries should actively explore and deploy disruptive technologies like AI, IoT, robotics, blockchain, AR, and VR to enhance service delivery, resource management, and user engagement.
3. African library leaders should foster a culture of experimentation, creativity, and openness to change by encouraging staff to test new ideas, learn from failures, and adapt quickly to evolving user needs.
4. National and regional library associations in Africa should raise awareness about adaptive leadership and its role in navigating disruptive technological innovation, targeting both senior and emerging library professionals.
5. African libraries should form partnerships with universities, tech companies, and government agencies to share resources, knowledge, and best practices in adopting disruptive technologies.
6. African governments and library governing bodies should develop policies that support adaptive leadership practices, technological innovation funding, and technology integration in African libraries.
7. African librarians should be encouraged to engage in lifelong learning through workshops, conferences, and online courses focused on adaptive leadership and technological innovation.

8. Adaptive leaders should prioritize user needs by redesigning services around accessibility, personalization, and digital convenience, ensuring libraries remain relevant in the digital age.
9. African libraries should establish mechanisms to assess the impact of adaptive leadership and disruptive technologies on service quality, user satisfaction, and institutional sustainability.

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