Analysis of the Integration and Innovation of Information Technology in Archive Management

Hui Li

Zibo Vocational Institute, Zibo, Shandong 255314, China

Abstract: *With the development and progress of society, modern science and technology has made a breakthrough, modern society has fully entered the information network era, the development and application of information technology in all fields of society has reconstructed the social industrial structure. Information technology has natural advantages in information transmission, sorting and analysis, and can quickly integrate a large amount of information together, which brings great convenience to archives management. In recent years, with the help of information technology and related resources, archives management has eliminated the disadvantages of traditional management mode and optimized the archives service. the "one belt, one road" initiative is the result of the profound transformation of economic development, the profound change of development pattern and the cultural exchange and interaction in different countries. From the perspective of "one belt, one road" to enhance the discourse dimension of cultural confidence, the historical context and the space-time pattern are the dimensions of the cultural confidence. The historical materialism and materialist dialectics are the philosophic dimensions of enhancing the cultural confidence under the "one belt and one road" initiative. It provides important opportunity for the economic, political and cultural development of the countries along the line, which is the value dimension of the "one belt and one road". At present, "one belt, one road" initiative to enhance cultural confidence is faced with a realistic challenge in the ideological field, such as complex situation, weak cultural and external communication power, and difficulties in guiding public opinion in cyberspace. To solve these difficulties, first, we should consolidate the mainstream ideology of Marxism; second, we should strengthen the construction of foreign discourse system; third, we should pay attention to the construction of ideological and cultural positions on the Internet.*

Keywords: Information Technology; Archives Management; Convergence Analysis.

1. CURRENT SITUATION OF INTEGRATION

Traditional archives management is mainly based on paper files. With the continuous progress of society, the number of archives is increasing, which leads to the work of archives management is becoming more and more complicated. In the late period, the archival information inquiry and retrieval work has become quite difficult in the face of a huge database. To effectively combine the archives management mechanism with modern information technology, that is to use information technology to optimize the various links of the archives management, effectively improve the efficiency of the archives management, ensure the smooth storage of the archives information resources, from the way to change the archives management. At present, archives management work needs to rely on computers to complete, through big data, cloud storage and other technologies to achieve digital archives management. the fusion of archives management mechanism and information technology has obvious characteristics.

That is, the archives management which integrates information technology has network nature. That is, archives management work relying on Internet technology can achieve information sharing and circulation, speed up the transmission efficiency of archives, from which we can see the network characteristics of archives management work. the subject of archival demand can find out the archival information he needs from the Internet terminal, and can carry out internet-based archival service. At the same time, modern archives management work also has the characteristics of wisdom, that is, through the fusion of information technology to change the way of archives management, to achieve automatic management of archives, so that the complex archives management work has become easy and simple. Some traditional file management links can be omitted, greatly improving the efficiency of file management work. At the same time, the application of information technology archives management work has changed, archives management work in a new digital form. Archives management is a kind of data management. Finally, modern archives management has the characteristics of efficient operation. Based on the Internet platform, all units can better carry out information exchange, and the coordination of archives management is also gradually improving. Archives management in different areas can be shared and integrated through information technology.

2. INTEGRATION STRATEGY

General secretary Xi Jinping, one of the "one belt, one road" initiative, is rich in the historical context and value dimension, based on the economic integration and development of various countries, the profound changes in the development pattern of various countries and the cultural exchange and interaction. The initiative is a major development plan with China as the initiator and connecting countries along the world. It aims to promote the close cooperation and development between China and the countries along the Silk Road to achieve mutual benefit and win-win results. "One belt, one road" initiative is not only important for economic cooperation and reciprocity among the countries along the line, but also has important value and realistic significance for promoting cultural exchanges and cultural references among various countries, enhancing China's cultural confidence, highlighting China's charm, China spirit and China's strength. One belt, one road, is the historical context and the space-time pattern. "Cultural self-confidence refers to the overall recognition and full affirmation of a certain cultural subject to its own cultural value, and a sense of pride and firm belief in its own cultural vitality."[1] Nationality and culture are symbiotic and coexisting in a certain sense. The more confident a nation is in its own culture, the more confident it will be.

2.1 Overall planning and steady progress

The building of archives digital management platform is also one of the key contents of modern archives management. Relevant departments need to build archives digital platform in accordance with national policies and requirements. And in accordance with the requirements of modern archives digital management system to guide the staff to carry out archives management work, so as to achieve the best effect of archives management work, to achieve the intelligence of each link of archives management work. Relevant units in the introduction of information technology, need to carry out research work in the early stage, put forward new requirements for the new archives management system, to ensure that the integration of information technology after the archives management work in line with the requirements of the unit. the unit can also refer to the international archives digital management experience, establish a new archives management mechanism, all-round supervision and management of the new technology, to ensure its quality, once found problems will be solved in time.

2.2 Service innovation and upgrading

Archives digitization platform is an efficient service and humanized platform. From the point of archives management mechanism, establishing digital archives management platform needs to understand archives demand by means of questionnaire survey subject's actual demand, after understanding the actual demand of archives demand subject, aiming at the existing problem of archives management system is optimized, as the main body in the file needs to provide more high quality and personalized service, in order to impel the upgrade of archives service. the archival demand subject obtains the required archival resources from the network through various terminals such as mobile phones, computers and other intelligent devices. From this point of view, the archives management platform needs to optimize this service to facilitate the efficient retrieval and filing of the subject of archives demand. From the demander's point of view, innovation management form, to meet the needs of users, is one of the directions of archives management development.

2.3 Establish an interconnected cloud sharing mechanism

Integrated with information technology, archives management can ignore the limitations of region and time, and realize the interconnection between files and files, and between people and files. the digital archive management platform can rely on cloud storage technology to store a large number of archive resources every day and realize resource interconnection. To achieve this, organizations need to purchase a CLOUD storage system and build a resource sharing platform around the cloud storage system. In addition, it is necessary to set up a firewall in the cloud sharing terminal to improve the anti-risk capability of the cloud sharing terminal, avoid the interference of the cloud sharing terminal by outside criminals, and prevent malicious access, malicious intrusion, viruses and trojans to destroy the cloud sharing system, so as to fully guarantee the security of digital archive resources.

3. PUTTING SAFETY FIRST

The premise of data archive management is security, and the traditional archive management work also puts archive security in the first place. When developing online archives management, relevant units need to build digital archives management platform. From two angles to look at the archives security management. the first is

technical and managerial. Technical management mainly refers to the archival management department using information security management technology to achieve archival resource management, but also using block chain, firewall and digital watermarking technology to protect the security of archival data. Using these technologies can better guarantee the safe operation of archive digital platform.

Management perspective is to implement the more detailed rules of the archives management work, conscientiously implement and execute the archives management work, promote the archives management personnel in accordance with the safety management standards to carry out the work. Relevant units should also strengthen the professional ability of file management personnel, through training to improve the safety awareness of file management personnel, enhance the ability of staff to manage files. the second is to use good security monitoring. Security monitoring refers to the use of information technology to identify the contents of archives in the process of archives digital management, so as to ensure that archives resources will not be modified or moved in a non-normal way, and to minimize the threat posed by human factors to archives digital management. In addition, the archives management department should also establish a sense of security management, do a good job of backup in the ordinary archives management work, and ensure the security of archives resources, to ensure the authenticity and reliability of digital archives resources.

4. APPLYING ESG DATA MANAGEMENT TOOLS

4.1 Risk Management Tools

"We found that Hong Kong is ready for the ESG information disclosure, and we want ESG to be a risk management exploit," said Katherine Ng, chief operating officer and head of Policy and Secretariat Services of the Listing Division of HKEX.[18]In recent years, ESG risks of Chinese enterprises have been erupting constantly. For example, many listed companies such as ST Huifeng, Shanxi Road&Bridge and Luoping Zinc Power, have been publicly condemned by the stock exchange for the reasons of environmental information disclosure. The weakness of ESG data management ability of enterprises will affect information disclosure and investors' views, weaken risk prevention and decrease enterprise benefits. The adoption of risk management tools by enterprises is conducive to timely find, avoid risks and realize sustainable development. For ESG risk management, primarily, a more transparent ESG platform should be established, which can clearly present all ESG data and view different ESG risks from multiple angles. Secondly, the ESG database can be combined with the existing industrial chain data and knowledge map, and the hidden risks that were not easy to detect before can be found by looking at the correlation between companies. Using the standard data, investors could look at ESG risks from the perspective of the whole industry. Lastly, combined with natural language processing technology, the part of ESG risk extracted from social media was effectively integrated. Different from previous ESG risks and ratings, the ESG risks of enterprises can be updated better and faster through ESG Risk assessment platform.

4.2 Standardized Data Management Tools

Multinational enterprises adopt "group-department-subsidiary-country -supply chain data monitoring" to achieve the ESG data management goal of "standardization and automatic calculation".[19] Moreover, enterprises can use the integrated ESG data management platform to realize the unified management of pluralistic business groups and supply chain data, which will solve the problem of ESG information dispersion for enterprises, improve the quality and efficiency of ESG information disclosure, and promote enterprise lean management and ESG brand building.

4.3 Carbon Emission Data Management Tools

In the speech "Tragedy of Horizons" in 2015,[20]the Chairman of the Financial Stability Board (FSB) stated that climate change risk has not been linked with financial stability and long-term risks of financial institutions, which has brought obvious negative effects. The original intention of the establishment of TCFD (Task Force on Climate-related Financial Disclosures), a working group on climate-related financial information disclosure, is to change this phenomenon. TCFD proposes a series of suggestions to improve the disclosure and management of climate-related risks, including the requirements for enterprises to disclose scenario analysis.[21]Enterprises should manage and disclose climate change information according to the standard framework, requirements and suggestions of TCFD.

Consequently, in order to better manage and disclose climate changes, some products for carbon management have been developed. For instance, carbon accounting and management platform (CAMP) invented by Carbonstop,

which is the one of advanced software in China.[22]CAMP can be used to quantify, analyze, manage and report carbon emissions of enterprises. Compared with Excel, the software allows users to input, analyze and manage carbon emissions at anytime and anywhere conveniently. Further, it helps enterprises to establish top-down organizational structure, so that the superior departments can comprehensively and directly supervise the carbon emission information of the lower level. Lastly, it also has the function of data audit which records the data source and chart analysis, realizing scenario analysis, merger and comparison of emission sources and carbon emission information disclosure.

5. ESTABLISH PALTFORM FOR ESG DATA UNIFORMITY AND NORMALIZATION IN ENTERPRISE

The data required to be disclosed in ESG report should cover production, procurement, human resources, sales and other fields. Nevertheless, some data are difficult to cross the boundaries between various departments within an enterprise. The main reasons are as follows:

5.1 Due to the Diversity of Business, ESG Information are Scattered in Different Procedures and Operation Links

The definition and scopeof ESG information are quite different. With the expansion of business, this problem is more prominent than ever. Taking the carbon emision data as an example, it varies in statistics and calculation methods, which will weaken the information value and then affect the follow-up ESG management.

There may be complex in the management of different regions, businesses and projects, and the manual data verification is tedious, and easy to make mistakes. Within the enterprises, the discrepancy in kinds of reports will also bring great challenges to the accuracy of ESG data.

Lack of process monitoring, failure to identify and deal with potential ESG risks timely and effectively. Enterprise's ESG information is often collected annually, and there is with a large lag, no real-time and traceable ESG information management system for the whole process. As a result, enterprises can't make corresponding improvement measures according to ESG performance in time, which brings potential ESG risks and misses the opportunity to turn risks into business opportunities.

Despite the disparity of methodologies and confusion caused by rating inconsistencies, the field of ESG will (and must) continue to evolve. Data abundance, despite the lack of standardization, is a great problem to have, so long as investors and enterprises are willing and able to pick what matters to them and move forward[23].

5.2 Establishing ESG Data Management Paltform

5.2.1.ESG Platform Management

The system is customized according to the current situation and challenges of enterprise ESG management, so as to fully meet the personalized and differentiated needs for the enterprises improvement. Secondly, it facilitates enterprises to develop a unified ESG online information collection method, set up reasonable path, and output data and charts to achieve the visual monitoring of ESG performance, aiming to provide high-quality ESG data for management decision-making.

5.2.2 RPA (Robotic Process Automation)

Robotic process automation is a technique that uses technology and software to automate structured and repetitive business processes. Computer software is configured to mimic the actions of humans in a bot-like fashion, enabling rapid interaction and transmission of data from source to destination based on established business processes and their underlying data flows. [24] The introduction of robots as labor force can effectively complete the repetitive work in the ESG information management, greatly reduce the labor and time cost, reduce the probability of errors, and ensure the quality of information output. At the same time, enterprises are free from worries about the loss and change of project management or information management personnel. All kinds of information interfaces and databases established or to be established by the enterprise can be seamlessly connected, the existing reports can be automatically imported, and the scattered ESG data can be captured, so as to realize the interconnection of various ESG information databases within the enterprise.

5.3 Communicating with External Consulting Agencies

The ESG database is established according to the requirements of professional rating agencies such as MSCI and DJSI, using measurement index and model to improve the content of the report to ensure the professionalism and integrity of disclosure information. ESG information is transformed into performance of sustainable development that investors can use conveniently. For listed companies, better ESG performance and higher ESG rating directly affect investors' attention and long‑term economic returns. MSCI index is the most widely used investment target for global portfolio managers, and its ESG rating results have become an important basis for decision‑making of major investment institutions around the world. The MSCI rating process integrates risk exposure with management practice and management performance, which is regarded as an important basis for measuring key performance.

6. CONCLUSION

In general, informatization is the trend of globalization. After the use of information technology, the management of archives has achieved the innovation of management mode. At the same time, the digital platform built by using information technology can provide convenient inquiry and file adjustment service for the subject of archives demand, and give full play to the social service value of archives. Relevant units need to attach importance to the construction of archives digitization and accelerate the realization of archives digitization. In conclusion, ESG management will not only be reflected in the company's financial report, but it is related to the sustainable development of the enterprise. It aslo shows that enterprises with good ESG data have stronger anti‑risk ability and tend to have long‑term stable development, so efficient ESG governance has gradually enhanced the positive impact of the company's reputation, business sustainability and investor confidence. It is not an easy task for enterprises to put effective ESG governance into practice. On the basis of effective stakeholder participation, enterprises in the future will hopefully establish a comprehensive sustainable development strategy, an effective ESG risk management and internal control system on important issues. Otherwise, it is hard to bring the sustainability of corporate growth into reality.

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