# New Era, New Mission, New Connotation–Information Resource Management and Human Digital Ecological Civilization

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## Abstract

Based on the foundations of the era, answering the questions of the era, and leading the changes of the era. The Party' s 20th National Congress scientifically planned the goals, tasks, and major policies for the development of the Party and country' s cause for the next five years and beyond, proposing to advance the great rejuvenation of the Chinese nation through Chinese modernization. The 20th Party Congress report points out that the essential requirements of Chinese modernization are: upholding the leadership of the Communist Party of China, upholding socialism with Chinese characteristics, achieving high-quality development, developing whole-process people' s democracy, enriching the people' s spiritual world, achieving common prosperity for all people, promoting harmonious coexistence between humanity and nature, promoting the building of a community with a shared future for mankind, and creating a new form of human civilization.

## Full Text

## Preamble

A New Era, New Mission, and New Connotations–Information Resource Management and Human Digital Ecological Civilization
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Grounded in our era, responding to its questions, and leading its transformations. The 20th National Congress of the Communist Party of China has scientifically planned the goals, tasks, and major policies for the Party and country' s development over the next five years and beyond, proposing to advance the great rejuvenation of the Chinese nation through Chinese-style modernization. The Congress report states that the essential requirements of Chinese-style modernization are: upholding the leadership of the Communist Party of China and

socialism with Chinese characteristics, achieving high-quality development, developing whole-process people' s democracy, enriching the people' s spiritual world, achieving common prosperity for all people, promoting harmonious coexistence between humanity and nature, building a community with a shared future for mankind, and creating a new form of human civilization.

The 14th Five-Year Plan and the Long-Range Objectives for 2035 propose the goal of "building a digital rule system and fostering an open, healthy, and secure digital ecology." Digital ecological civilization represents a new form of human civilization emerging in the current digital economy era and constitutes one manifestation of this new civilization. It encompasses both the digitalization of existing civilizations and entirely new civilizational forms emerging from novel digital modalities. Digital ecological civilization expresses the beautiful vision and unremitting efforts toward the ecological development of digital civilization, as digital environments increasingly merge with physical environments and digital forms intervene more extensively and profoundly in all aspects of the real world, guiding digital civilization from its nascent stages toward maturity.

In this new era, as digital ecological civilization gradually takes shape and becomes an indispensable component of human civilization, the discipline of Information Resource Management has undergone years of development, evolution, and transformation to establish its rightful name. From the perspective of disciplinary nomenclature, it clearly expresses that its research objects are no longer limited to books, archives, and scientific literature, and its social service domains extend beyond libraries, archives, and documentation centers. The discipline of Library, Information and Archives Management has long conducted unremitting theoretical exploration and made important practical contributions in areas such as information ecology, information value and economics, enterprise knowledge management, government data management, health and medical big data, digital humanities, social network public opinion, and national security intelligence. The renaming of the discipline to "Information Resource Management" is fully justified, creating necessary conditions and an enabling environment for the discipline to deepen and expand its research connotations and extensions in the digital era and to become a major force in building digital ecological civilization.

The discipline of Information Resource Management possesses inherent advantages in both the digital inheritance of human civilization and the presentation of new digital civilizations in the digital age. It has developed mature theoretical foundations and practical methodologies for researching information value excavation and utilization, and has conducted systematic explorations in information ecology and information economics, achieving landmark results. With the advent of the big data era, research on data value has continuously deepened alongside the wave of the digital economy. How to leverage the role of data elements in human production and life, activate the potential of data elements, improve market rules for data elements, and drive transformation in production methods, lifestyles, and governance models through digital transfor-

mation has emerged as a key area of interdisciplinary research. Building upon the disciplinary foundations of Information Resource Management in information chains, information value, information ecology, and information economics, and adapting to China's strategic orientation of digital transformation across all fields, it is necessary for the discipline to systematically and holistically explore and reflect upon the practical goals and real challenges of advancing human digital ecological civilization under the new requirements and trends of digital transformation, with data as the driver. This includes strengthening research on data value, data value chains, and data value-driven digital transformation to empower and facilitate the shaping of new forms of human digital ecological civilization and the modernization of national governance systems and capabilities.

"Discovery and Creation of Data Value" and "Innovative Application of Data Value" represent two critical issues in data-driven digital transformation, covering all stages of data value creation, release, and application. By promoting comprehensive transformation mechanisms—including conceptual change, data collaboration, and organizational restructuring—across different application scenarios, we can discover data value, drive data value recreation and digital ecosystem construction, and profoundly transform the digital capabilities and value propositions of various organizations. This is of great significance for fostering a sound national digital ecological civilization. Data innovation can cultivate a healthy digital ecology, thereby advancing the in-depth development of digital government, digital economy, and digital society.

Exploring the analysis, release, and coordination mechanisms of data value, researching the path coupling and service empowerment models of data innovation, clarifying the deep integration paths between new technologies such as blockchain and artificial intelligence with the real economy, and thereby elucidating the mechanisms for the virtuous cycle of data innovation activities within the system can provide theoretical foundations for accelerating industrial transformation and upgrading in the digital and intelligent transformation of traditional industries, and can positively contribute to the formation of digital ecosystems in traditional industries.

The new era has endowed the discipline of Information Resource Management with a new mission. Upholding its essential disciplinary attributes and developing new connotations, Information Resource Management should actively construct and play a principal role in the process of human digital ecological civilization.

The research objects of Information Resource Management are, macroscopically, information resources. Specifically, in the fields of data value-driven digital transformation and data ecology, the concrete research objects can be defined as: data value chains; creation and release of data value; data innovation paths and service empowerment models; and digital ecosystems. The research content includes: Basic theories and methods of data value-driven digital transformation from the perspective of digital ecology. This includes

clarifying the conceptual connotations and theoretical extensions of data value, data rights confirmation, data assets, and data innovation applications; sorting out the subordinate relationships and categories, characteristics and factors involved in various concepts, as well as the logical relationships among related concepts; and exploring theoretical analysis models or research methods such as experiments, simulations, and modeling oriented toward specific research questions. Research on data value creation and release and data value chains. This includes specific research on the forms, content, categories, and corresponding data analysis methods of data value; the principles of data value generation and value creation mechanisms; the objectives, scope, procedures, and paths of data value release; the subjects, elements, and operational models in the release process; and the principles of data value transmission and value release mechanisms. Based on data value chains, it is necessary to research the constituent elements and operational mechanisms of data value chains and explore value creation issues for various types of data—including government data, scientific data, and enterprise data—against the backdrop of comprehensive digital transformation encompassing political, economic, cultural, social, and ecological civilization construction. For the upstream of the data value chain, it is necessary to sort out various types of data from governments, research institutes, and enterprises, and deconstruct the content structures and metadata characteristics of data provided by suppliers. For the midstream of the data value chain, it is necessary to address issues such as data rights confirmation and secure data sharing around data elementization. For the downstream of the data value chain, it is necessary to focus on data assetization to address issues such as data trading and data monetization, thereby promoting the realization of data value creation. Scenario-based realization of data value through collaborative innovation applications. Oriented toward data application scenarios in government, industry, society, and scientific research, this involves researching collaborative innovation of multi-source data in scenario-based applications, constructing a government-industry-academia-research collaborative data ecosystem, and addressing issues of collaborative application of data value. It is necessary to make full use of case studies, experimental simulations, and other methods to design human-centered collaborative innovation applications of multi-source data for various application scenarios in government, industry, society, and scientific research to advance digital ecological civilization construction.

In today' s era, information technology, network technology, and intelligent technology are developing rapidly, with data, information, and knowledge growing exponentially and intelligence and wisdom innovating iteratively. The discipline of Information Resource Management in the new era should shoulder the heavy responsibility of human-centered digital ecological civilization construction, serve the digital transformation and high-quality development of all fields in the information society, and contribute to Chinese-style modernization and the great rejuvenation of the Chinese nation.

*Note: Figure translations are in progress. See original paper for figures.*