The Evolution and Development of Information Management Model——From Data Management to Smart Management

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Abstract: Clarify the development of information management model, clarify the basic connotation and operational mechanism of smart management, solve the problems of knowledge management, study the development trend of knowledge management, and improve the efficiency of information management. [Methods/Processes] Data, information, knowledge and wisdom are the main research objects of information science. They explore their connotations and their progressive and parallel relationships, and analyze the development logic and evolution process of data management, information management and knowledge management. Based on this, the concept, connotation, operation mechanism and development and development of knowledge management of wisdom management are expounded. [Results/Conclusions] Studies have shown that smart management is an inevitable result of adapting to the development of a smart society and a new growth point for the study of information management models.

1. Introduction

In recent years, the philosophical, educational, and graphic circles have successively carried out research on wisdom concepts [1], wisdom values [2], and smart services [3], and wisdom management research has entered the academic field. At present, research on smart management focuses on two aspects, namely, "smart management" and "management wisdom." First of all, "smart management" refers to managers using wisdom to manage or use artificial intelligence management. Lv Yigao believes that wisdom management is to use human wisdom to create land to overcome difficulties, solve problems and resolve contradictions; Rong Rong et al pointed out that information technology The direction-oriented wisdom management is the development direction of education management; Lu Minhui and others believe that the use of artificial intelligence can realize the wisdom management of urban planning. Secondly, "management wisdom" refers to the management of wisdom and the improvement of the effectiveness of wisdom. R. L. On the basis of knowledge management, Ackoff outlines the wisdom formation and development model that uses information and knowledge to think, make decisions, implement and reflect. Ma Guansheng and

others use wisdom as the management object, put forward the wisdom management concept, and construct the content system of smart management. . The wisdom management studied in this paper belongs to the second aspect, namely "management wisdom". After experiencing information management modes such as data management, information management and knowledge management, information science is gradually entering the era of smart management. Smart management has become the focus of academic circles after knowledge management. In-depth understanding of the basic connotation and operational mechanism of smart management is not only an inevitable trend in the development of knowledge management, but also an inevitable result of solving the problems existing in current knowledge management. Based on the clarification of the development of information management model, this paper analyzes the basic connotation and operation mechanism of smart management, and explores the expansion and promotion of knowledge management by smart management.

2. Historical evolution of information form

As the most important and basic research object of information science, information has broad and narrow meanings: generalized information includes all phenomena of nature and human society and their cognition, and narrow information is the relationship between data. Explanation. There are many classification methods for general information research, and the representative ones are "three-point method" and "four-point method". The "three-point method" is based on the theory of the "three worlds" of the British science philosopher K. Popper, which divides information into three categories: the first is information about the objective physical world, which reflects things. The state of motion and its changing mode; the second category is information about the subjective spiritual world of human beings, that is, the implicit information in the sense of subject theory or epistemology, which reflects the state of motion and the way of change of things that human beings feel, in the state of consciousness and thinking. The third category is about objective explicit information, that is, humans use language, words, images, film and television, data and other carriers to express the state of motion of things and how they change. The "Three Worlds" theory provides a basis for comprehensive understanding and accurate grasp of generalized information classification.

3. The development of information management mode

Hu Zhuanglin (1994a: 12) believes that past experience or social and cultural traditions can influence the speaker's beliefs, so the "???" in the Chafe model is modified into cultural evidence, and the knowledge source in the Chafe model is further revised to Cultural, sensory, verbal, and hypothetical. Chafe (1986) compared the differences in the use of evidence in English conversation and academic writing in the study. Hu Zhuanglin (1994b) also studied the use of evidence in English news reports and debates. As the holder of a narrowly plausible view, Willett (1988: 56) defines plausibility as a representation of the source of knowledge. After analyzing 38 languages, he distinguished between direct and indirect evidence. The former refers to the source of information, obtained by visual, auditory or other senses, while the latter can be further divided into rumors (speaking or legend) and inference (results or reasoning).

   With the continuous development of information management technology, information management objects are transformed from data flow to information flow, and then from information flow to knowledge flow, and information management mode is changed from data management mode to information management mode. Then, from the information management model to the knowledge management model. The three management models evolved from the low-level to the advanced, and this evolution has continued for more than half a century. With the advent of the era

of big data, the importance of data has been continuously improved. The mining, analysis, application, and control of Internet data resources have been widely used in the above three information management modes. Information management stems from data management, and knowledge management stems from information management. The information management model is not only the result of the development of information management, but also reflects the requirements of the era of information management. At the same time, the defect of information management mode is conducive to clarifying the development of information management mode.

Data management and its defects. The data is a reflection of the facts. According to the data generation, transmission, storage, configuration, and analysis process, data management uses data sources, data streams, databases, data networks, and data applications as management objects to clarify data definitions, establish data standards, and build data dictionaries. Optimize data structures, build databases, coordinate data usage, and leverage data to provide data protection for management and decision making. Managers combine their own knowledge, experience and skills to process and process data to aid decision making. This management model is data management.

Information management and its defects. Information management is an information management model based on data management and information flow as a management object. Information has realistic usability. Through the management and control of information flow, information management effectively solves the diversity, complexity and disorder of data and adapts to the specificity of specific management needs. Effectively develop and utilize information resources, managers can quickly obtain the required information and provide information security for decision-making.

Knowledge management and its defects. Knowledge management refers to the discontinuity, uncertainty and unpredictability of the organization or individual in the face of the environment. It is based on information, using technology as a means, and systematically and organizationally identifying, acquiring, storing, and Apply and disseminate knowledge and translate it into management activities of quality and competence. Enhance the organization's value creation ability through the management and application of the acquisition, sharing and innovation of internal and external knowledge of the organization.

4. Conclusions

After the data management, information management and knowledge management, the information management model has entered a new management stage--the wisdom management stage. As the main research object of information science, there is a parallel and progressive relationship between data management, information management, knowledge management and smart management. Wisdom management is based on solving the problems existing in knowledge management and developing on the basis of knowledge management with the aim of using high-level knowledge. The research and implementation of smart management first needs to analyze the problems and shortcomings of knowledge management, clarify the concept, connotation and operational mechanism of smart management. Based on this, it proposes the research focus of smart management in the future, and realizes the improvement of knowledge management by smart management. The management of wisdom management has promoted and improved knowledge management. By focusing on the management of intelligent resources and wisdom, it has made its positioning more accurate and more focused. From the perspective of information science, wisdom management is a new trend of the future development of the discipline. It provides a more effective management idea and a new perspective, which opens up a new path for breaking through the current dilemma of knowledge management. However, the concept of smart management and its research from the present to the present, the research results are not rich; the theory and practice of

smart management are very lacking, and the research is still in its infancy. The information science community needs to study the formation of wisdom and its complicated cognitive process, continue to clarify the boundary between wisdom and knowledge, explore the connotation and formation mechanism of wisdom, and deepen the study of wisdom management on the basis of clarifying the wisdom concept, focusing on the theory of wisdom management. System and method system, gradually build a sound theoretical framework and develop specific use methods, and combine management theory and management practice to improve the efficiency of smart management. This requires more academic peers to conduct long-term and in-depth collaborative research in theory and practice to jointly promote the development of smart management research.

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