Dilemma and Optimization Path of Emergency Management Information Construction Enabled by Digital Technology

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Abstract: Under the background of the rapid development of digital technology, the information construction of emergency management is facing unprecedented opportunities and challenges. This paper discusses the application status of digital technology in emergency management information construction, facing difficulties and optimization path, aiming at promoting the information construction of emergency management department, and providing feasible suggestions and analysis for the emergency management department's digital technology enabling emergency management construction, for reference.

Key words: Digital technology; Emergency management information; Optimize the path

1. Overview and development of emergency management information construction

With the development of society, all kinds of emergencies faced by emergency management departments are increasingly complex and changeable, which not only pose a threat to people's lives and safety, but also may affect social order and the normal operation of production and life.

In the early days, emergency management mainly relied on traditional administrative means, such as paper documents, telephone notices, etc., which had great limitations in the speed and accuracy of information transmission. With the development of information technology, emergency management departments began to explore the use of computer networks for information management, and initially realized the electronic storage and transmission of information, improving the efficiency of information processing. with the popularization of Internet technology and the rapid development of mobile communication technology, the information construction of emergency management has entered a new stage. government departments began to build a comprehensive emergency management platform, integrating multiple functional modules such as information collection, processing, release and feedback, so as to realize real-time information sharing and multi-department collaboration. At the same time, the rise of mobile applications promoted emergency managers to quickly obtain emergency information througth mobile phones and other mobile devices, improving the coverage of information and the speed of response.

With the development of emerging technologies such as big data, cloud computing, and artificial intelligence, the informationization construction of emergency management has ushered in new opportunities. Big data technology can improve the scientific and accurate nature of emergency decision-making; Cloud computing technology can make emergency management information systems more flexible and efficient. Artificial intelligence technology can improve the intelligence level of emergency response. In the future, emergency management departments will pay more attention to the comprehensiveness and intelligence of information construction, and achieve comprehensive information sharing and efficient coordination through technological innovation and management optimization, thereby improving the overall level of emergency management. At the same time, personnel training and infrastructure construction will also become the focus of ensuring the sustainable development of emergency management information systems.

2. The practical dilemma of emergency management information construction enabled by digital technology

2.1 Barriers to information and data sharing still exist

Although the development of digital technology has provided strong support for the rapid transmission and processing of information, the phenomenon of data silos is still serious in actual operation. Information barriers between emergency management departments and departments in various regions are an important reason for the difficulty of data sharing. Emergency management departments in different regions have their own independent information systems, and there is a lack of effective interconnection mechanism among the systems. When emergencies occur, information cannot be shared among departments in different regions in a timely manner, resulting in slow emergency response and even asymmetric information. Secondly, due to the lack of unified data standards and norms, there are big differences in data formats and coding methods among regional departments, and the integration and analysis of data becomes difficult. Moreover, a large amount of sensitive information needs to be handled in the emergency management process, and improper data sharing may lead to information leakage, raising legal and ethical issues. As a result, regional departments often adopt a conservative attitude when sharing information, which further exacerbates the phenomenon of information silos.

2.2 The shortage of emergency management information talents

On the one hand, the training system of emergency management information talents is not perfect. lack the systematic training of the cross-field of emergency management and information technology. On the other hand, the information construction of emergency management is a complex and arduous task, which not only requires practitioners to have solid professional knowledge, but also needs to have a strong sense of responsibility and the ability to withstand pressure. However, compared with other industries, the field of emergency management has obvious disadvantages in terms of salary and career development prospects, and many outstanding talents are more inclined

to other industries when choosing their careers. At the same time, the emergency management department lacks an effective incentive mechanism and cannot provide a good platform for information talents, so it is difficult to retain emergency management information talents for a long time. This situation is more serious in remote areas and towns.

3. Digital technology enables the optimal path of emergency management information construction

3.1 Strengthen the interconnection and sharing of information resources

As an important place to deal with emergencies, emergency management departments need to make full use of digital technology to break down information islands and realize efficient sharing of information resources in the construction of emergency management information. In this regard, local emergency management departments should build a unified information resource sharing platform, integrate all kinds of emergency resources, ensure the timely transmission and effective use of information, and realize cross-regional data exchange. The information resource sharing platform should have the functions of data collection, processing, analysis and display, and support the integration and analysis of multi-source data. Emergency management departments should formulate unified data standards and interface specifications to ensure seamless docking of data from different regions and improve the availability and reliability of information resources. At the same time, the platform should have a flexible permission management mechanism to ensure data security and privacy protection, and prevent information leakage and abuse. In practical applications, emergency management departments can rely on cloud computing and big data technology to achieve centralized data storage and management, support simultaneous access and operation by multiple users, and improve the efficiency of information processing. For example, the municipal emergency management bureau can monitor the security situation of the county-level emergency management bureau in real time through the platform to discover and deal with emergencies in a timely manner; Logistics support departments can obtain operational data of emergency department facilities through the platform to optimize resource allocation; Management departments can understand the resource information of emergency management departments through the platform to provide data support for handling emergencies. Through the interconnection and sharing of information resources, various departments can work together to form a joint force and improve the efficiency and effectiveness of emergency response. In addition, cooperation with other government agencies should be strengthened to realize external sharing of information resources. For example, cooperation should be established with enterprise emergency management departments, medical institutions and scientific research institutions to share emergency information resources and jointly respond to emergencies. Through cooperation with different institutions, emergency management departments can obtain more data support and improve the scientific and precise nature of emergency decision-making.

3.2 Improve digital information infrastructure

Compared with the investment in scientific and technological innovation, scientific research and other investment, the investment in emergency management information construction is relatively small, which is easy to lead to some information equipment obsolete, unable to meet the needs of modern emergency management. In order to improve this situation, the emergency management information construction should be included in the regional development plan, and special funds should be increased to ensure that the information construction is carried out simultaneously with other construction in the region. Secondly, with the rapid development of information technology, the construction of emergency management information needs to constantly introduce new technologies to adapt to the ever-changing emergency environment. To this end, all regions should strengthen cooperation with scientific research institutions and enterprises, actively introduce new technologies, and improve the level of emergency management informatization. For example, technologies such as cloud computing, big data and the Internet of Things can be used to realize real-time monitoring and analysis of emergency information. To this end, the information equipment should be checked and maintained regularly, and the new equipment should be replaced in time to ensure the normal operation of the equipment. At the same time, the management and maintenance of information equipment should be strengthened, and the standard process of equipment use and maintenance should be established to improve the efficiency of equipment use. In addition, the training of emergency management information infrastructure should also be strengthened to improve the emergency management personnel's ability to use information equipment. The information literacy of emergency management personnel can be improved by setting up relevant training and organizing drill activities, so as to ensure that they can skillfully use information equipment in emergency situations and improve the efficiency of emergency response.

3.3 Training comprehensive emergency management personnel

At present, the demand for talents in the construction of emergency management information shows a diversified and complex trend, which not only requires talents to have solid professional knowledge, but also requires them to master advanced information technology, and have a strong sense of innovation and practical ability. Therefore, when cultivating emergency management information talents, it is necessary to start from many aspects and comprehensively improve the comprehensive quality of emergency management personnel. For example, in the school curriculum setting, it is necessary to break the boundaries of traditional disciplines and build an interdisciplinary curriculum system. Professional courses on the integration of emergency management and information technology are offered, such as "Emergency Management information System Design" and "Big data Analysis and application", so that students can master the basic principles and application methods of information technology while learning the theories of emergency management. Secondly, training personnel is the key for emergency management departments to cultivate high-quality talents. Attention should be paid to the introduction and training of a group of compound trainers who are proficient in both emergency management and information technology, so as to improve the professional level and practical ability of the trainers. At the same time, emergency management personnel should be

encouraged to participate in the research and development of emergency management information projects, and the latest scientific and technological achievements should be transformed into teaching content, so as to improve the pertinence and effectiveness of teaching. In order to consolidate the knowledge and operational skills of emergency management personnel, regular training or emergency drills can be conducted to continuously improve the professional ability of emergency management personnel.

3.4 Unify the standard system of emergency management planning

First of all, emergency management departments may formulate unified data format standards to specify the structure, content and presentation of various types of information and data, so as to facilitate information sharing and exchange. At the same time, a set of strict information security standards should be established to ensure the security and confidentiality of information during transmission and storage. Secondly, in the construction of the unified emergency management planning standard system, we need to pay attention to the continuous improvement of standardization construction. Through regular evaluation and optimization of the existing standard system, to meet the new needs of emergency management information construction. For example, a standardization construction committee could be established to be responsible for the formulation, revision and supervision of the standard system. In addition, a set of incentive mechanism for standardization construction should be established to encourage departmental emergency management personnel to actively participate in standardization construction and improve the implementation effect of the standard system. In order to ensure the effective implementation of the unified emergency management planning standard system, standardization training and publicity should also be strengthened to improve the awareness and understanding of emergency management personnel on standardization construction. For example, experts in the field of standardization can be invited to explain the standard system and implementation methods of emergency management information construction to emergency management personnel. At the same time, the importance and necessity of standardization construction should be widely publicized through internal websites, publicity bars and other channels to enhance the standardization awareness of emergency management personnel.

4. Concluding Remarks

In short, with the continuous development of information technology, through the empowerment of digital technology, the emergency management information construction in colleges and universities can realize the efficient sharing of information, promote the stable operation of the system, realize the professional development of talents, and provide strong support for the scientific and intelligent emergency management.

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