Research Article

Optimization of Land Resource Information Management System Based on Internet of Things

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The business process model of information management is also optimized, while helping the relevant departments using the system to improve their work efficiency. After research and analysis, this paper shows that the land resource information management system can be divided into four functional modules, which are basic land resource information management, land resource land use approval management, official document information management, and office business management, and these modules can effectively complete the work related to land resource management. The full and reasonable use and protection of land resources can ensure the implementation of sustainable development policies, and the development of land resource management is the basic requirement of national modernization and the inevitable trend in the country, and because land resource management covers a large amount of information involving a wide range of information, including information within the scope of work, it is very necessary to ensure the effectiveness and accuracy of land resources and information. The information system can effectively improve the efficiency and accuracy of land resources and information. Information system can effectively improve the development, management, research, and use of land resources; electronic government system can help land resources to obtain accurate analysis and research and detailed access to the ability to understand the status of resources, in the daily changing data information dynamic understanding of the development of information changes, and grasp the latest trends in land resources, the trend of analysis, and monitoring of market resources, to provide customers with reliable decision support. It is a powerful background data guarantee for customers to provide reliable decision support.

1. Introduction

The level of information development has gradually increased, information technology has led to the rapid development of other industries, the rapid progress of high-tech industries has become step by step an important indicator of a country region in the development as well as the direction, while information technology is also an important assessment indicator of the degree of modernization and the level of economic development [1]. For the development of the entire national economy and life need to effectively use the management of land resources and land natural information, land resource management has become a key task; land resource management has played a very important role in the long-term development of our economy and society; along

with the urgent needs of economic development and the use of land resources and mineral resources in the process of increasingly serious problems, these problems cover the illegal use and other key contradictory issues such as the occupation of land. At the same time, the construction level of our cities urgently needs to be more on a higher level, making the shortage of land resources and mineral resources present new challenges in the process of land resource management, so how to improve the speed of land and mineral resource use has become a key issue that urgently needs to be solved nowadays, and land resource management departments need to effectively combine information technology, land information management technology, and resource information management technology. Using the abovementioned technologies can improve the efficiency of land and

mineral resource information management, and the influx of information technology has gradually become the direction of improvement in the development of land security management [2].

With the advent of the new era, the comprehensive management of land resources is currently undergoing a comprehensive reform and comprehensive construction; the promotion is mainly carried out from three aspects of information technology, land information management and scientific management, and the standardized management of land resource information; land resources cover a variety of natural information, through a transparent information management system, to achieve scientific management; transparent system can enhance the land. The transparency system can enhance the efficiency of land resource management, strengthen the degree of information sharing, and face the public development which is more conducive to the power from the private sector. According to each information and demand analysis and considering the current situation of information technology development, this paper proposes a comprehensive management information service system for the construction of urban land resources, by realizing the functional modules within each management business [3]. An information sharing platform is built, while the business process model of information management is optimized and while helping the relevant departments using the system to improve their efficiency; at the same time, in order to avoid relatively isolated data that cannot be effectively used, the use of information systems can effectively use the data, the overall structure of which is a system building model with application requirements as the core [4]. Land resources are the natural treasures of the country's social development and survival, and effective management of the country's land resources can provide a favorable guarantee for the survival and development of the general population, while the effective use of natural resource development can make a remarkable contribution to the economic development of our country [5–10]. The full and reasonable use and protection of land resources can ensure the implementation of sustainable development policies; in the country, the development of national land resource management is the basic requirement of national modernization as well as the inevitable trend, because land resource management covers a large amount of information involved in the vast, including the scope of work of the information, so to ensure the effectiveness and accuracy of land resources and information has a very necessary practical significance.

With the comprehensive arrival of information-based E-government, the management of land resources also puts forward the corresponding challenges and opportunities; information systems can effectively improve the development, management, research, and the use of land resources; E-government system can help land resources to obtain accurate analysis and research, detailed access to understand the status of resources, and the ability to dynamically understand the development of information changes in the increasingly changing daily data and information as well as grasp the latest trends in land resources, the development trend of the analysis, and monitoring of market resources, to provide cus-

tomers with reliable decision-making support to do a strong backstage data security, strengthen resource management planning, and provide land and resources for the further development of the plan in our country. E-government information management system design and construction need to capture the actual needs after field research, through customizing business processes and system to adapt to business processes, and use a unified modeling language to analyze and model resource needs accordingly, to ensure that the system can meet user needs and design a model structure diagram to meet the software development engineers; the system architecture can adapt to the development of technology, while the system can easily adapt. The system architecture can be adapted to the development of technology, while the system can be easily upgraded and expanded, and the secondary development and postmaintenance of the software product can be treated to ensure that the software product has a long life cycle.

The structure of this paper can be shown as follows.

In Section 2, we mainly introduce the related work about the information technology and application about the management system. In Section 3, we mainly introduce the use of the abovementioned technologies and the influx of information technology. In Section 4, we mainly introduce the system optimization test.

2. Related Work

Information technology and E-government in Europe and the United States took the lead in the development and emergence of the United States and other early developed countries to establish a complete system of business systems; information technology was used to take the lead in the field of government management; in the early 1970s, the United States first used information technology to enter the field of high-speed information management construction, the modern tell highway for scientific management, while in the 1990s, information technology has been widely used in the field of government, and the research experience has been gradually developed comprehensively, as shown in Figure 1. The information technology is used to build a browser-server model of management system, and a high-performance server is used as the back-end processing core at the processing terminal of the system to build a hierarchical and centrally managed information system [11].

E-government has been used in the West for a long time and has been widely developed as well as accumulated profound development experience [12]. In terms of land resource management, American scientists in 1998 had proposed the concept of digital earth, that is, the digital construction and layout of global geographic information; digital earth is the layout of network informationization of land resource information, virtualized storage of realistic land resource information, and, with it, the corresponding birth of geographic information system. With the development of national land informationization, in the late twentieth century, Western countries such as Canada joined one after another in the comprehensive construction of digital earth, and at the moment of the end of the twentieth century,

FIGURE 1: Multiterminal land management system.

various publications, maps, and earth science information from various units have been integrated, so users can query, browse, and evaluate [13].

In the Ministry of Land and Resources Ministry which actively promote the cities and municipalities, the integrated management of land resource center text information system is conducive to the information construction of land resources, construction of land resource information system, and information modeling of land resources which can ensure the effectiveness and efficiency of business; in recent years, land resource management did make sufficient progress and achievements, but compared to the internationalization of land resource information, there is still a certain gap in the development of land information management information technology research which is late, the basic information resources are relatively poor, and national resources and land capital are rich, but the real degree of lack of certain management, the government's limited level of management cognition, and lack of certain investment in reform courage as well as boldness, coupled with the relative lack of talent in this area, for the construction of land resource information technology has not do persistent research and accumulation, the lack of construction experience leads to the lag behind the information technology infrastructure; the overall level of information technology is low [14]. These gaps also need to be improved step by step by subsequent research scholars, and a series of problems currently encountered are mainly shown below. The geographic construction of data-based information is still in the backward stage, the geographic information construction started late, the collection and entry of geographic information have certain problems in the development, and these problems limit the further development of the construction of geographic resource management; at the same time, there is a relative lack of talents in

this area, the degree of understanding of the treatment of land resource management is relatively backward, and the theoretical research on the construction of land resources is relatively lacking [15].

At present, research and the development of land resource information platform are a hot topic, a large number of scholars have gradually recognized the importance of the issue, and a large number of research and discussion can help the management of land resources step by step on the right path of development. The effect is obvious; land resource information management is more orderly; the advanced technology to cover all urban construction in the network environment makes full use of [16] dynamic remote sensing monitoring of land use and remote management of cadastral information; in recent years, the land area change data will be used to obtain the most accurate records; the local government has been introduced in a timely manner suitable for the construction of policies; land management information systems have been used in certain areas in the city; advanced technology is currently being promoted and popularized, a strong impetus to the development of land information and technical team and the growth. This paper will focus on the design and implementation of land resource information systems [17]. The information technology research of the time period is late, the basic information resources are relatively poor, the country is rich in resources and land capital, but the real degree of the lack of certain management, the government's limited level of management cognition, and the lack of certain investment in reform courage as well as boldness, coupled with the relative lack of talent in this area, for the construction of land resource information technology did not do persistent research and accumulation; the lack of construction experience leads to lagging behind of information technology infrastructure; the overall level of

information technology is low. Information technology drives the rapid development of other industries and the continuous development of scientific knowledge related to the establishment of scientific development [18].

Due to the implementation of land use in the land management system, the new land management law of the country, arable land protection land use planning, and a series of regulatory measures in all aspects, the rapid progress of high-tech industry has become step by step an important indicator of a country region in the development as well as the direction. Office automation products are being popularized step by step; land information management systems are used to provide good operational tools and interfaces for land resource management [19]. It is necessary to control the scope of document circulation; multifaceted, multidepartmental coordination; and joint consultation to complete the division of tasks to further improve efficiency and ensure the quality of work. In accordance with the requirements of building a unified land resource and land sector, workers share a set of data sources that facilitate the establishment of a scientifically sound data framework, service framework, and runtime environment [20]. System can meet user needs and design a model structure diagram that satisfies software development engineers, and the system architecture can adapt to accommodate the development of technology, while the system can easily upgrade and expand and treat the secondary development of software products as well as post-maintenance to ensure that the software products have a long life cycle [21].

3. System Analysis

3.1. Overall Functional Analysis. The construction level of the city urgently needs to be more on a higher level, which causes the shortage of land resources and mineral resources and puts forward new challenges in the process of land resource management, so how to improve the speed of using land and mineral resources has become a key problem that urgently needs to be solved at present, and the land resource management department needs to effectively combine information technology, land information management technology, and resource information management technology [22–25]. The use of the abovementioned technologies can improve the efficiency of land and mineral resource information management, and the influx of information technology has gradually become the direction of improvement in the development of land security management. The level of information development has gradually increased; information technology has led to the rapid development of other industries; the rapid progress of high-tech industry has become step by step an important indicator of a country region in the development as well as the direction; this technology is not only the result of precipitation but also the pursuit of advanced results; scholars often want to use this new product to take a greater step in their own field, so in the subject of this paper, scholars are seeking effective use of management of land resources and natural information of land; land resource management has become a key task; land resource management plays a very important role

in the long-term development of our economy and society; while new phenomena arise, they also cause some new difficulties; new difficulties provide new problems to the field personnel, these problems cover other key contradictory issues such as illegal use and occupation of land.

Therefore, to ensure the effectiveness and accuracy of land resources and information has a very necessary practical significance, in the work process, to ensure the fairness and openness of information, while ensuring the accuracy and transparency of information; the sharing of information should also ensure that all departments can effectively use, while treating the maintenance of the system hoping to strive for simplicity and the establishment of a perfect and reasonable working mechanism and information data flow. The advent of the information age can also be a revolution in the management mode of government departments, which not only means that the business of the Chinese government is gradually transparent and open but also on the other hand can help the relevant government staff to use information technology products to achieve daily affair permitted management and even the use of information technology to build a browser-server mode of management system and the use of high-performance servers in the processing terminal of the system. The information technology is used to build a browser-server mode management system, and a high-performance server is used as the back-end processing core to build a hierarchical and centrally managed information system, as shown in Figure 2.

The level of development of information technology has gradually increased, information technology has led to the rapid development of other industries, and there is an establishment of scientific development of scientific knowledge related to the continuous development; due to the implementation of land use in the land management system, the country's new land management law, arable land protection land use planning, and a series of regulatory measures in all aspects, the rapid progress of high-tech industry has step by step become an important indicator of a country region in the development and direction and mature and advanced management information systems in the application, while information technology is also the degree of modernization, economic development level of important assessment indicators, geographic information systems, and office automation products, which has a step by step process to get popular; land information management system for the management of land resources provides good operational tools and interfaces, using better methods and ways to complete excellent work. Figure 3 shows the business flow chart, after several reviews and judgments to complete the business registration work.

Land resource management has played a very important role in the long-term development of our economy and society; this newly generated social phenomenon often also generates new problems; in several industries, it is the case; the management of land resources will also meet such problems; these problems cover other key contradictory issues such as illegal use and occupation of land. At the same time, the construction level of our cities urgently needs to be more on a higher level, causing the shortage of land resources and

FIGURE 2: Functional structure of land resource management system.

FIGURE 3: Flow chart of land registration business.

mineral resources; in the process of land resource management, new challenges arise, so how to improve the speed of land and mineral resource use has become a key issue that urgently needs to be solved at present, and land resource management departments need to effectively combine information technology, land information management technology, and resource information-management technology; the use of the above technologies can improve the efficiency of land and mineral resource information management; the influx of information technology is gradually becoming the direction of improvement in the development of land security management.

3.2. Use Case Analysis. Use case analysis is a functional level research study that captures the functionality of the system from a macro perspective. The use cases include its definition, all the necessary behaviors to execute the use case order,

the standard behaviors in different deformations, the general behaviors of all the abnormal cases, and the expected responses, without revealing the premise that the internal structure of the system defines a consistent behavior. From a user's point of view, the above cases may be abnormal cases; from the system's point of view, they must be described and attached to the handling of the case. More specifically, the use of the case is not required for functional specification but also shows and demonstrates its requirements in the process of illustration, in UML, using cases represented by an ellipse, in which the execution of each use case is independent from the other use cases, although due to the fact that when the case is shared, objects can generate implicit correlations between use cases for reasons of execution between a use case, each use case described in the vertical functional block, the execution of that functional block can be carried and mixed with other cases together, as shown in Figure 4.

FIGURE 4: System use case increase.

The functional functions have a many-to-many relationship with the system participants, where user roles with different privileges can perform the same functional functions, while each class of role users can perform multiple functional functions. There are various complex relationships between functions such as dependency, inclusion, and extension. By subdividing a function into multiple functions, the hierarchical relationship of the functional structure of the use case diagram is realized. In the use case diagram, participants are used for system functions, through the use case diagram that has clear participant system, you can see each participant's clear function at the same time; the use case diagram is very expressive; in the beginning of the do requirement analysis, we can derive the use case diagram and user verification, and thus, further, in each functional module of the subsystem, the aspect of the use case diagram in the system functional modeling is necessary.

Treating the field of land resource information construction has gradually figured out and summarized a set of suitable local land resource management methods, while with the help of today's popular information technology; in the actual work, Dalian City land capital has indeed taken a big step forward, compared to the previous work effectiveness that rose a lot, which has been built and put into use in some pilot cities and county land administration; through the use of information technology system, the effect is obvious; land resource information management is more orderly; and there is advanced technology overlay. Covering all urban construction, in the network environment, makes full use of land use dynamic remote sensing monitoring and remote management of cadastral information; in recent years, the land area

change data will be used to obtain the most accurate records; the local government has been introduced in due course suitable for the construction of policies; land management information system has been used in certain areas in the city, where advanced technology is currently being promoted and popularized, a strong impetus to the development of land information and technology team and the growth of information resources of land. This paper will focus on the design and implementation of land resource information system.

Land resource management plays a very important role in the long-term development of both our economy and society. Along with the urgent need for economic development, the process of using land and mineral resources has created increasingly serious problems, which cover other key contradictory issues such as illegal use and occupation of land. At the same time, the construction level of our cities urgently needs to be more on a higher level, making the shortage of land resources and mineral resources present new challenges in the process of land resource management, so how to improve the speed of land and mineral resource use has become a key issue that urgently needs to be solved at present, and land resource management departments need to effectively combine information technology, land information management technology, and resource information management technology; using the abovementioned technologies can improve the efficiency of land and mineral resource information management, and the influx of information technology gradually becomes the direction of upgrading the development of land security management.

At the same time, in order to avoid relatively isolated data that cannot be effectively used, the use of information systems can effectively use data, the overall structure of which is a system construction model with application requirements as the core. Land resources are the natural treasures of the country's social development and survival, and effective management of the country's land resources can provide a favorable guarantee for the survival and development of the majority of people, while the effective use and development of natural resources can make an outstanding contribution to the economic development of our country. The full and rational use and protection of land resources can ensure the implementation of sustainable development policies, and the development of national land resource management is a basic requirement for the modernization of the country as well as an inevitable trend at the national level, as land resource management covers a large amount of information involved in the vast scope, including the scope of work of the information, as shown in Figure 5.

3.3. Database Specification Design. Database detailed design is mainly to conceptualize the attributes of the entities involved in the system, design a suitable type for each attribute, build a database information table for each type of entity, record the changes of data information of the entity during the operation of the system, synchronize with the database in time, and maintain the normal operation of the system. According to the entity relationship model in the conceptual design stage of the database, certain conceptualization work is needed for the database, and some theories

FIGURE 5: Flow chart of land approval.

exist to study the relationship between database members, which mainly explore and study the relationship between objects, and there are dependency relationships, backup, and organization. The detailed database design is mainly to conceptualize the attributes of the entities involved in the system, design a suitable type for each attribute, build a database information table for each type of entity, record the changes of data information of the entity during the operation of the system, synchronize with the database in time, and maintain the normal operation of the system.

$$\tilde{x}_i = \lim_{n \rightarrow \infty} \sum_{i \in q} \sum_{q=0}^n \frac{q(i) + p(i)}{\max\{q, p\} - 1}. \quad (1)$$

According to each information and demand analysis and taking into account the current situation of information technology development, this paper proposes a comprehensive management information service system for the construction of urban land resources, which builds an information sharing platform by realizing functional modules within each management business, while optimizing the business process model of information management and while helping the relevant departments using the system to improve their work efficiency, and at the same time, in order to avoid relatively isolated data that cannot be effectively used, the use of information systems can effectively use data, the overall structure of which is a system construction model with application requirements as the core; the core formula of the login verification module of the system is shown below.

$$I(X, Y) = \frac{\lim_{n \rightarrow \infty} \sum_j^n \sum_i^n p(x, y) \ln_p(i, j)}{h(x + y)}, \quad (2)$$

$$h(x + y) = \ln(x + y)^{1/x+y}, \quad (3)$$

$$Q(x, y) = \frac{m(x + y)}{H(x) + H(y)}, \quad (4)$$

where $I(X, Y)$ is the mutual information between two sets of random variables X and Y . Here, X and Y correspond to two sets of label sequences characterized by clustering results and true labels, and the mutual information is based on the concept of information entropy, the formula of which is shown

above; $H(X)$ is the information entropy of random variable X ; $p(x, y)$ is the joint probability distribution function between x and y ; $p_{(xi)}$ is the marginal probability distribution function of xi . The range of NMI is 0~1), and its larger value indicates better clustering and vice versa.

Since land resource management covers a large amount of information and includes all information within the scope of work, it is very necessary to ensure the validity and accuracy of land resources and information, to ensure the fairness and openness of information in the work process, to ensure the accuracy and transparency of information, to ensure that all departments can effectively use it in information sharing, and to treat the system of QandPto make the maintenance work simple. And the efficiency (A) of the working surrounding can be improved.

$$Q \times P = \frac{(q + p)}{a + b + c + d}, \quad (5)$$

$$A = \frac{\max(x + y) - \min(x - y)}{\min(x - y)}. \quad (6)$$

4. System Optimization Test

Black box testing is often used to test the overall functionality of software and the functionality of software with graphical interfaces and the external structure of the program, and the black box testing method requires that the testing of the modules that divide the system be explicit and then test the input and output for each module, and then, the output results are actually tested to compare the actual output of the system with the ideal output of the user, and if they are not consistent, then a preliminary decision can be made that a function of the functional module is problematic, with exceptions and usually for testing the exception location method. The next white-box testing method is needed to analyze the detection. In the analysis from a macro-micro perspective, software testing methods can be divided into two main black box testing as well as white box testing; the so-called black box testing functional testing uses the software system that has an opaque black box, from a macro perspective that is only able to operate the input data for the system, to determine the output of the system and whether the user expects the results to be consistent; black box testing mainly

focused on the input and output system, the system from a system. White box testing perspective and testing methodologies corner the code to cover all branches, all statements in the program code for all possible errors, a comprehensive traversal of the test.

Of course, traversing all branches, can simplify the number of test case quality and is a worthy issue for discussion; white box testing has been widely used in software development work, helping developers to strive to find software defects and fix them in time. White box testing is transparent; white box testing mainly comes from testing, testing internal software products from the details, and the correction of problems found during the testing process. In the two phases of the software life cycle, software testing, which usually takes place after writing each module, is also called unit testing. Coding and unit testing belong to the same phase of the software life cycle; the software system does various comprehensive tests after the end of this phase, which is another phase of the software life cycle; the testing phase is very meaningful, as shown in Figure 6.

Test case is the process of software testing scenario test; test cases are used to determine whether the function of the software product is normal; test cases are often selected representative of some typical data, often by data analysts of the system's critical points, failure-prone points for analysis and extraction so as to design test cases, the system according to different functional modules, and test cases to design different programs; there are certain functional modules of the test of software test cases that are often targeted, comprehensive, and representative. Software testing benchmark test case, the structure of the system software product parameter variables, and the case of the execution of the test observe the software operation; the results, if the software preconditions are the same case, can indicate that the functional modules in the normal operation of the use case test need more cases to test and the test of time and withstand the test of time; the system is running stable and is a reliable system; if the test results and the expected results have a discrepancy, showing that there are certain problems with the functional modules, the system needs to be white box tested and tested in more detail to find the problems that exist in the existing system and to solve the program logic problems.

The use of information systems can effectively use data, the overall structure which is a system construction model with application requirements as the core. Information system can effectively improve the development, management, research, and use of land resources; electronic government system can help land resources to obtain accurate analysis and research, detailed access to understand the status of resources, dynamic understanding of the development of information changes in the increasingly changing daily data and information as well as mastering the latest trends in land resources, and the development trend of the analysis and monitoring of market resources, to provide customers with reliable decision support to do a strong backstage data security, strengthen resource management planning, and provide land and resources for the further development of the plan in China, which can provide accurate information services for government managers and at the same time can be in line

FIGURE 6: Comprehensive test of systematic induction.

with national development trends. In this paper, we have conducted detailed tests on each module of the system, which treats the user management module of the system as shown in Figure 7.

Select some representative values as feature values to test the functionality of the system. The system feature values need to represent and portray the software features of the system; have a comprehensive understanding of the design pattern, functions, and overall architecture of the system; and test the important modules of the system. The test cases of the system often need to be carefully designed, combined with the information system in different application scenarios for comprehensive testing; test cases often cover the common scenarios of the system as well as some special cases of abnormal scenarios and comprehensive testing of system functionality. Using an effective way to make up for the lack of supervisory power is also an important part of the urban emergency linkage system. In this paper, after in-depth research and analysis, a set of test cases is designed to meet the actual scenarios, and functional tests are conducted on several modules in the system to guarantee the testing quality as well as the credibility of the system.

This software test applies the testing theory of black box and white box, and the system is integrated and comprehensively tested with the software module as the basic unit. Land resources cover a variety of natural information, through a transparent information management system to achieve scientific management; transparent system can enhance the efficiency of land resource management and strengthen the degree of information sharing; facing the public development is more conducive to the power from the private sector, according to each information and demand analysis and taking into account the current situation of information technology development; this paper proposes the construction of integrated management information services for urban land resources. In this paper, we propose a comprehensive management information service system for urban land resources and build an information sharing platform by realizing functional modules within each management business. We tested its efficiency improvement, and the results are shown in Figure 8, which shows that the overall efficiency is improved by more than 2 hours compared with the blank control. At the same time, the business process model of

FIGURE 7: System cycle test performance.

FIGURE 8: Test efficiency before and after optimization.

information management was optimized, which also helped the relevant departments using the system to improve their work efficiency, and at the same time, in order to avoid relatively isolated data not to be used effectively, the use of information systems can effectively use data; the overall structure of this is a system building model with application requirements as the core.

5. Conclusion

The construction of an integrated management information service system for urban land resources has built a platform for information sharing by realizing functional modules within each management business, while optimizing the business process model for information management and at the same time helping the relevant departments using the system to improve their work efficiency. After field research and analysis, the land resource information management sys-

tem can be divided into four functional modules, which are basic land resource information management, land resource land use approval management, official document information management, and office business management, and these modules can effectively complete the work related to land resource management. The full and reasonable use and protection of land resources can ensure the implementation of sustainable development policies, and the development of land resource management is the basic requirement of national modernization and the inevitable trend in the country, and because land resource management covers a large amount of information involving a wide range of information, including information within the scope of work, it is very necessary to ensure the effectiveness and accuracy of land resources and information. In the analysis from a macro-micro perspective, software testing methods can be divided into two main black box testing as well as white box testing; the so-called black box testing functional testing is the software system as an opaque black box; from a macro perspective, it is only able to operate the input data for the system, in the daily changing data information dynamic understanding of the development of information changes, and grasp the latest trends in land resources, the trend of analysis, and monitoring of market resources, to provide customers with reliable decision support. It is a powerful background data guarantee for customers to provide reliable decision support.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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