Application of Internet Information Technology in Construction Project Management

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Abstract: Internet technology is applied in the construction project management, which builds the information delivery platform such as document management system, event management system and resource management system via the internet. It can make construction project management move cost, quality, construction period and safety control into a new level, improve the construction project management level.

1. Introduction

With the rapid development of modern Internet technology, new ways of communication and channels of communication are being accepted and used by more people. Convenient communication methods have greatly changed people's lives. In the field of project management, there is a large amount of investment in the project and a large number of units involved in the construction [1]. There is a large amount of information exchange, but most of the current information transmission methods are still in accordance with the traditional information channels formed many years ago. Traditional communication channels for engineering information are mostly horizontal communication through documents and meetings, and vertical communication is carried out through orders from upper and lower organizations. Communication outside the conference is basically a one-on-one approach [2]. Such inefficiencies in communication was complicated communication lines and relatively easy communication errors. The Internet technology development results applied to the construction management, to the inherent communication channels and ways to effectively add. By increasing the number of communication channels, enhancing the accuracy of information exchange, and implementing the authenticity of information transmission, the overall quality of communication can be enhanced, the cost of information communication can be reduced, and the collaboration and efficiency of various participating units can be enhanced.

2. Application Status of Project Management Information Technology

The project information management includes the decision-making process, the implementation process, the information generated during the operation and the information related to the project construction, such as: project organization information, management information, economic information, technical information, regulatory information [1]. At present, the information management of all parties involved in construction management has made great progress compared with the past. Most of the management of construction projects also uses computer information management techniques, such as list pricing software, material management software, engineering financial software and so have been widely used [2]. The application of these software is more of the process of creating, storing, retrieving and processing information within a given participant. However, there is still no major improvement in the information communication between the parties participating in the project. The information transmission networks involved in the large-scale parties have not been able to effectively solve the problem. The project site still uses traditional channels of information communication. The current information communication mode can not be transmitted in real time in terms of cost and space, which can easily lead to delays in information delivery and distortion of information transmission. It can not be time-efficient and can not solve a

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large number of pending problems in time.

Information processing is the most common and most likely to cause errors in the implementation of the project is the exchange of information. Deviations in the delivery of information lead to difficulties in the integration and sharing of project management information. Project information can be effectively managed and collected only by forming the correct communication between the parties involved in the construction management. This is where the weakest link in project management today is. Rely on the existing Internet technology development capabilities, the use of modern information technology tools, will participate in the project owner, project management unit, design unit, material supply unit effectively connected to meet the engineering economy, improve quality, legal and security risk and reliable. Therefore, it is necessary to realize the real-time file management, event management and resource management by using the new Internet technology.

3. The New Internet Technology in Project Management Applications

The development of modern Internet technology, information sharing and database services can be safely recorded, timely access and query. After the construction of the information system, a system that can exchange information centrally is formed for the events, records formed and resource data stored during the process of project construction, so as to provide an open, effective and timely information communication environment for all units involved in the project construction.

At present, there is mainly a large number of communication management needs in the on-site management, mainly in progress management, quality control and safety control. The management of resource information mainly exists in labor management, material supply and supply management of machinery and equipment. The difficulties of progress management, quality control and safety control mainly focus on the construction of a wide range of construction, real-time and meticulous communication and coordination according to the site conditions, issue of correct instructions and the inability of all personnel to timely coordinate and solve problems because of a certain problem. The new Internet technology can be real-time control of timely communication, from the basic document management, incident management and resource management to form a coordinated development.

3.1 Internet file management system

The main content of the new document management system is to provide the participants with the most detailed and basic information through the Internet technology platform. The system stores information of all parties, administrative permission, opinions of government departments, minutes of projects, pictures, photographs, reports or images appearing in various projects or according to requirements of technical nodes so that the entire project is formed Database to participate in the construction of all parties open, and set permissions [2]. In this way, the basic data of the whole project can be guaranteed. It is convenient and ready to keep abreast of on-site construction and operational needs and provide timely technical information to ensure smooth cooperation with various cooperating units so as to reduce technical and legal risks.

3.2 Internet incident management system

During the construction process, from the beginning of the project planning to the project put into use, many participating units participate in the project management at different times. Constraints between the participating units subject to risk factors, with the basic approach to a low efficiency of communication and cooperation, and even the cooperation between units of the authenticity of the information itself is also questionable, so inefficient cooperation. The use of new Internet technologies, event management through the network to achieve the whole process of information sharing mechanism, that is, the incident began, with the original video, data, text and other records of the time from start to finish the whole process of information. With real and detailed information to reduce the participation of all parties involved in the integrity of risk

concerns, to achieve information management track to effectively improve the information needs of the lateral management. At the same time, according to the way of incident management, the whole information is transmitted across the management level, which makes the entire information management organization flatten, allowing the events to be objectively transmitted in every management level and improving the effectiveness of vertical management.

3.3 Internet resource management system

The resources contained in the process of building management are mainly composed of labor resources, machinery and equipment resources and materials supply resources. New Internet management technology, the use of real-time information and database sharing and other ways complete the construction project, the use and consumption of various resources, suppliers and manufacturers of production capacity situation and so on. At the same time, the technology can control the completion of construction projects, automatically form the relevant statements in the actual implementation process, compare and adjust the project investment and progress management, improve the utilization rate of project resources and reduce the problems arising from the supply of resources work stoppages and nest work and other losses, so that the ability to provide resources to raise a new level [1].

4. Internet-based Construction Project Information Management System in Project Management Significance

At present, the development of Internet technology is a huge information revolution. Due to the rapid development of Internet technology, it has provided new ideas and solutions for the management of construction projects and has had a lot of practical significance in engineering construction and management.

4.1 Effectively reduce the cost of the project

After accepting the Internet technology, the time and efficiency of information communication between the user and the designer can be effectively realized from the planning stage of the project, the parties involved in the project can be connected in real time, the mistakes and mismatches in the scheme design stage can be effectively reduced, decision-making quality, reduce the subsequent changes due to poor communication and so on. In addition, the early intervention of the audit department, you can track all the original audit data more perfect, so that more effective calculation of the overall project settlement cost. From the global management can significantly reduce unnecessary losses, effectively reduce the overall project cost [1].

4.2 Effectively improve the quality of the project

In the process of project construction management, through the development of various information management channels such as event management and resource management, the actual construction conditions in the construction process of the project are known to all the units involved in the construction. Originally rely solely on the construction unit and the supervision unit of the project quality control, without increasing labor costs under the premise of the design, construction, supervision, auditing and other departments of joint real-time control [2]. The actual construction site situation does not require all personnel to be able to understand the progress and control of the entire project, the project construction process actually increased the number of management, and is conducive to all professional off-site personnel to understand the actual situation of the entire site, the quality problems can be intervened and controlled when possible, which is beneficial to the improvement of the overall project construction quality.

4.3 Effectively shorten the project duration

Internet technology effectively reduces the level of horizontal communication and vertical communication within the management organization through the overall integration of information, events and resources in construction projects. In the whole project management can achieve the

organization of the flat management, improve the efficiency of decision-making, effectively shorten the construction period, but also through the resource allocation of Internet, reduce information delays or resource purchase is not timely, etc., to reduce the errors caused by the decision-making events Delays also reduce project delays due to individual errors.

4.4 Effectively reduce the security risk

Safety management is one of the most important projects in the whole project management. The control of security risks runs through the entire implementation phase of the project. After the adoption of Internet technology, especially the entire scene is stored digitally. The first approach is to reduce the awareness of the project implementation staff, the entire project department to improve the degree of emphasis on safety management; the second is that the project may be implemented in the potential safety problems of the site truthfully published in all the participants in the line of sight. The potential safety problems can be dealt with in time and the unscrupulous behavior in the process of implementation can be halted in a timely manner.

5. Conclusions

To sum up, the vigorous development of Internet technology in our country and the scientific and technological revolution represented by Internet technology continues to make breakthroughs. The construction industry relying on the application of Internet new technology in project construction management can make the management of construction project take a new step. Through the real-time and effective management of project data, project events and project resources, the construction quality, investment and safety and other project management are used in the practical problems.

References

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