

## Research Article

# The HRM Model Based on Competency Model in the Context of New Age Intelligence

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In the new era of rapid technological development, new technologies are emerging: mobile positioning technology, face recognition technology, two-dimensional code technology, artificial intelligence technology, etc. In the trend of the times, these emerging technologies continue to penetrate into people's daily life and influence their social habits. At present, the shadow of emerging technologies such as artificial intelligence has already appeared in human resource management and organizational behavior, and the application of these emerging technologies will certainly promote the change of human resource management and organizational behavior and have a double impact on human resource management and organizational behavior. On the one hand, emerging technologies such as artificial intelligence bring new opportunities for the development of human resources, which can not only improve the efficiency of human resource management, optimize human resource organizational behavior, and accelerate the transformation of enterprise management mode. On the other hand, the application of these emerging technologies also brings new challenges for HR development and management: the enterprises' demand for low-end positions decreases, increasing the employment pressure in the talent market; the enterprises' development faces transformation and rectification, increasing the difficulty of survival of small enterprises; the employment difficulties and development prospects of HR departments are uncertain. In the context of the new era of intelligence, the impact of emerging technologies on human resource management and organizational behavior is bound to intensify, and enterprises should innovate ideas and integrate new ways and methods to upgrade the traditional human resource management model and seize the opportunity to promote human resource management changes, so that emerging technologies such as artificial intelligence can inject new vitality into modern human resource management. Based on this, this paper proposes an enterprise HR management strategy based on the competency model and combines it with a practical case study and finds that the strategy has been recognized by 91% of employees within the company and has effectively improved the efficiency of HR management.

## 1. Introduction

The gradual deepening of the economic system reform has promoted the continuous transformation of people's values and ways of thinking [1]. The development of economy, politics, and culture has created a large number of pioneering private enterprises, bringing new opportunities for diversification, and at the same time, how to make the internal modern management mode and external development promote a virtuous cycle is not only a question that enterprise managers should think about but also a challenge that every human resource practitioner must go through [2]. In the process of production and operation, enterprises need to reasonably allocate land and

equipment, as well as capital, personnel, and other various elements. The human resource department, as the pivot of the organization that coordinates and promotes the work in an orderly manner, is being paid more and more attention by the main body of the enterprise, and it is the trend to develop and optimize the traditional human resource management mode to make it the core competitiveness of the enterprise [3]. If an enterprise not only "selects" but also "employs" and "nurtures," it also knows how to retain fully exploit the potential of employees. To maintain the balance of the internal cycle of the enterprise, we can have enough time to cope with the market competition and lay a solid foundation for the long-term sound development of the enterprise [4].

In modern society, HR is particularly important for the strategic significance of enterprises [5]. Good human resource management and organizational behavior will stimulate the enthusiasm of employees, improve the market competitiveness of the enterprise, and enhance the cohesion of the enterprise [6]. At the present stage, many enterprises in China are facing the huge pressure of transformation and reform, which requires enterprises to effectively guide human resource management and organizational behavior to promote corporate change and enhance the innovative vitality of enterprises [7].

HRM is a task-intensive job that requires a lot of manpower and effort and is tedious and prone to errors due to lack of energy. The introduction of emerging technologies such as artificial intelligence into the process of HRM, using the superior computing and analytical capabilities of artificial intelligence, assists human resource workers to carry out routine operations such as employee career file establishment, departmental ledger management, job analysis, and evaluation in a relatively effortless manner, relieving employees from boring work and improving the efficiency of HRM work [8]. Artificial intelligence simplifies the management mode of HRM and organizational behavior and improves the standardization of performance management. The use of employee attendance systems such as voice recognition and face recognition greatly reduces the investment of human and material resources in HRM, provides a basis for employee participation in performance appraisal, and in turn provides a referenceable and rational basis for the formulation of employee compensation systems. Emerging technologies such as artificial intelligence create virtual scenarios for employee training and improve the effectiveness of training [9]. 3D technology combined with artificial intelligence can present the virtual scenes required for employee training in a realistic manner. Using dynamic video technology, employees can participate in the entire training process from a first perspective and provide real-time skill feedback for employees, enhancing the effectiveness and professionalism of the employee training process and meeting the overall interests of the unit [10].

In the staffing of enterprises, the phenomenon of mismatch between competency and position sometimes exists, so that some potential talents cannot play the most effective role in the organization, resulting in the waste of human resources. The career assessment system integrated by emerging technologies such as artificial intelligence can transform the ability characteristics of employees into intuitive data, so that enterprises can more accurately grasp the ability and expertise of employees and scientifically place each employee so that every employee in the enterprise can make the best use of his or her talents [11, 12].

## 2. Related Work

*2.1. Current Status of Foreign Research.* HRM system was proposed by Aswale and Waghmare in the middle of the last century [13]. On this basis, there are numerous later scholars who have deepened and improved it. In the

mid-1970s, Tuan analyzed and researched human capital theory, and it has been used ever since [14]. With the recovery of global economy and trade, HRM system has been improved. In the last century, the outline of modern HRM was first revealed due to the impetus of technological management theory and other developments [15]. Along with the development of market economy, the influence of corporate culture on the company's business development began to be "seen" [16], and in the 1980s, academics paid more and more attention to the influence of corporate development by HRM system, and the research direction was gradually adjusted to how to improve the management objectives and realize the deepening exploration and reinforcement of modern HRM-related theories [17].

Foreign HRM research can be divided into two main categories: macro and micro. Among them, macro HRM focuses on the analysis of the role of HRM from the perspective of organizational performance, and micro HRM focuses on the exploration and discussion of HRM practices from the perspective of individuals. In recent years, scholars have conducted more analyses and studies on HRM from a general perspective, emphasizing HRM strategies and operations, and the need to make timely adjustments by combining corporate goals with the external environment. In 1999, in the study of strategic HRM, the meaning of "strategy" was defined by Mohiuddin et al. as "the relationship between HRM policies and practices and organizational output" [18]. In practice, such ideas are more often used as guiding principles by various organizations [19].

*2.2. Current Status of Domestic Research.* In the 1980s, the concept of HR was introduced in China. In recent years, the domestic academic community has made great progress in the research of the system in this field and harvested a large number of research results that can be used to guide practice. For example, from the perspective of talent selection as an entry point, in-depth analysis and research have been conducted to discuss the importance of the direction of talent development and professional training [20]. On the issue of HRM system, Lu et al. [21] made a systematic study using comparative research method and analyzed the current situation faced by domestic enterprises. In addition, some domestic scholars have given corresponding countermeasures and suggestions in the light of the specific reality of the construction of domestic HRM system. At the same time, some industry scholars have made in-depth research on the comprehensive quality of scientific and technological talents required by enterprises, and the results have been combined with the actual construction of a more comprehensive system, which is applied to the multidimensional assessment of scientific and technological talents. All of the above are the more representative research results in this field in China for more than 30 years. Due to the unfavorable realistic conditions of the late start of domestic research on human resource management, the relevant domestic research is still at the stage of development and improvement [22].

*2.2.1. Labor and Employment Management Is Not Standardized Enough.* Some of these enterprises do not have standardized management, and there are even phenomena such as not purchasing insurance for employees, delaying signing and not signing labor contracts. At the same time, they do not pay attention to the talent reserve, lack medium and long-term planning of talents, and only start recruitment temporarily when the enterprise is facing a shortage of staff. In the recruitment process, there is a lack of consideration of suitability with the development needs of the enterprise [23].

*2.2.2. Talent Function Is Not Set Up Properly.* The unreasonable setting of talent functions is a problem faced by most enterprises, which is manifested in the unclear division of labor and the lack of rationality in the setting of department personnel. For example, there is a gap between personnel management ability and work needs. In the long run, employees are not clear about their own rights and responsibilities; it is naturally difficult to mobilize the subjective initiative [24]. The company's departmental ecology is ineffective. The low ecological efficiency of the enterprise department is also another kind of resource waste.

*2.2.3. Lack of Perfect Incentive Mechanism.* Mechanical manufacturing enterprises by and large lack a variety of incentives, tend to focus on material incentives, and lack of attention to the effective motivation of the spiritual level; the realization of employee self-worth often stops at slogans or patterns. Modern enterprises cannot fully consider the actual needs of employees and simply and brutally use material rewards as an incentive, and employees lack a sense of belonging. There is no interchangeable ladder between work, career, and ideal. As a result, the connection between the company and its members is one-way and single, mercenaries are soulless, loyalty is often fragile, and such hidden problems are not apparent during the stable period of the company, but once they encounter bottlenecks and hurdles in development, it is often too late to recover from the blowout [25].

*2.2.4. Lack of Uniform Standard Performance Evaluation.* For any modern social enterprise, the top priority of its human resource management is to build a scientific, reasonable, transparent, and relatively fair personnel evaluation system. This includes evaluation standards, systems, methods, and results. This set of standards should even exist independently of any internal organization. If paternalistic management wants to divest itself of the inefficient model of family-based development, it must respect this system and include the top manager of the enterprise in this personnel evaluation system, so as to minimize the unnecessary consumption of personnel within the enterprise and avoid the situation that the management mode of the private enterprise transformation process is driven backwards.

*2.2.5. Lack of Sound Internal Training.* In the new era, in the face of new technologies and new knowledge, the lack of knowledge reserves and the phenomenon of lagging in the staff, business managers, and the helmsman are reflected in varying degrees. For the machinery manufacturing industry,

the comprehensive ability of employees and the level of science and technology are low; in response to this situation, enterprises should pay more attention to staff training and education, through regular internal training to enhance the level of skills and comprehensive quality of employees, together with a breakthrough in the current development bottlenecks faced. But the actual situation is that many business owners in the machinery manufacturing industry that the training costs are too high, preferring to choose the low cost of direct recruitment. So only look at the short-term economic benefits of enterprises and cost-saving practices, enterprises in the staff can not learn the relevant new knowledge and new skills, and job efficiency can not be improved; personal improvement and progress needs are not met for a long time, and the trend of increased brain drain is also justified.

The rapid development of the times has led to the integration of artificial intelligence technology with human resource management as an important trend in human resource management. The development and application of artificial intelligence and other emerging technologies such as human image recognition and data mining are already quite mature in today's society, so when HRM integrates artificial intelligence and other emerging technologies, it is an important development opportunity for HRM: to improve the efficiency of HRM, to optimize the structure of HRM, and to accelerate the transformation of HRM model. Of course, we cannot ignore the negative impact of the use of artificial intelligence: replacing traditional manpower and causing structural pressure in the job market. What we need to do is to base on the reality of the times, so that technology can be used for us and play the most supportive role.

### 3. Methodology

Regarding the composition of the HRM system, there are five major interacting and interrelated modules, which include the following: module 1, performance management; module 2, human resource management; module 3, employee training and development; module 4, employee recruitment; and module 5, compensation and benefits management. From the enterprise's perspective, HRM system not only affects the quality and quantity of its internal talents but also influences the achievement of the enterprise's strategic goals (see Table 1).

Through theoretical research on competency and competency model construction, a solid theoretical foundation is laid for the further realization of competency model construction in enterprises. Therefore, this paper focuses on the project management field, defines the object of competency model construction as the project manager in the project, and constructs a competency model suitable for the project manager position by designing and using a systematic construction method.

The competent leader model was proposed by the International Institute for HRM are in Figure 1. (1) Knowledge refers to the organization and use of useful information that a person has about a particular occupation or position. (2) Skills refers to a person's ability to master and apply

TABLE 1: HRM system items.

Modules	
Training and development of employees	<p>The content should first set up a special training organization to determine the training objectives and needs, then set up training courses and systems, and finally evaluate the training effect objectively and fairly to ensure that the skill level and work attitude of the participating employees can be improved, so as to ensure that the training is effective.</p>
Employee recruitment	<p>In addition, new employees should be given effective guidance to help them adapt to the new work environment as soon as possible; for serving employees, the job performance and other contents should be used as a reference for their positions to make suitable adjustments, or demotion, or promotion or departmental transfer.</p>
Performance management	<p>Performance evaluation results help employees to summarize their own strengths and weaknesses in the work process in a timely manner and help managers to provide timely training and guidance for employees; business managers usually refer to the evaluation results when making decisions on staff promotion and then use the results as the basis for implementing targeted training programs.</p>
HRM	<p>This module mainly involves eight contents: one is career planning, the second is equipped with planning, the third is labor safety production planning, the fourth is training planning, the fifth is assistance planning, the sixth is recruitment planning, the seventh is labor organization planning, and the eighth is compensation incentives.</p>
Compensation and benefits management	<p>Human needs are divided into five different levels, the lowest level of needs is survival needs, followed by security needs; after these needs are met, there will be social, respect, self-actualization, and other higher level needs; enterprises should be combined with their own reality and the different needs of employees to develop corresponding compensation measures to maximize the satisfaction of employees to mobilize their subjective motivation and maintain a good working condition.</p>

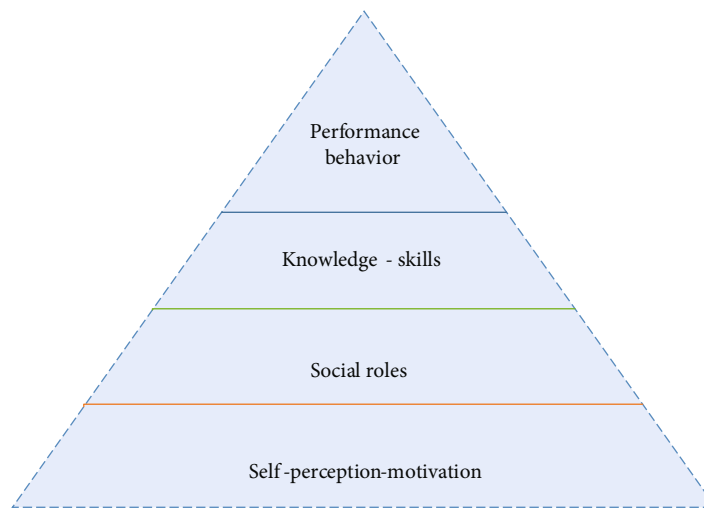


FIGURE 1: Competency ladder diagram.

technical knowledge in a comprehensive manner to accomplish a specific job. (3) Social role refers to individual knowledge and understanding of social norms. (4) Self-understanding refers to a person’s sense of identity, i.e., knowledge and perception of one’s own identity, and values (5) Motivation refers to the natural and stable thoughts that determine dominant behavior.

3.1. *Enterprise Project Manager Competency Model Construction Method.* In the construction of the enterprise competency model, it is necessary to focus on the important

positions in the enterprise, and enterprises generally put the key management aspects of enterprise development on the management of construction projects, so the competency of construction project managers directly determines the effectiveness of the implementation of enterprise strategy development. Project manager is a position with high comprehensive quality requirements, so the competency model of project manager should be comprehensive, systematic, and comprehensive, and the competency characteristics are mutually influencing and promoting each other, which can eventually produce performance differences.



Then, how to design the competency model is worth studying. Most of the projects have one-time characteristics, and project managers, unlike other employees in the enterprise, have strong independence and autonomy, and many of their behavioral performance in the job is not monitored in real time and lack of competency screening. Therefore, a comprehensive selection of multiple construction methods is needed for design.

First, the selection of project manager competency characteristics for different projects requires determining the competency performance criteria for project managers from a variety of literature queries and preliminary research.

Second, the study of the competency elements for project managers needs to determine what kind of project managers are good and what are average, so a sample of calibration standards needs to be constructed.

Third, based on the sample to carry out further in-depth research on the competency characteristics of project managers, this paper focuses on the analysis of project manager profiles of domestic companies, interviews of project managers on key events, and questionnaire surveys of employee groups related to engineering and construction projects.

Fourth, the information obtained is analyzed, screened, and transcoded to finally determine the project manager competency elements in a universal sense.

Fifth, the project manager competency model was constructed by naming the competency elements based on their classification.

Sixth, the completed project manager competency model is validated.

Therefore, the construction of the competency model for the enterprise can be carried out in the following five aspects (as shown in Figure 2).

### 3.2. Enterprise Project Manager Competency Model Construction

**3.2.1. Project Manager Competency Elements.** Through relevant literature combing and cases of project managers, the performance criteria of project managers are clarified so as to construct a project manager competency model in the general sense of the company; therefore, the selection of calibration samples should start from the project to be built itself. The construction objectives of a certain engineering construction project should be clarified; as the complexity and construction requirements of different engineering construction projects are different, the competency requirements for project managers are also different. However, by analyzing the information of project managers of large- and medium-sized projects in China, some universal competency characteristics can be derived, and the weights of these characteristics are different for different projects.

In order to better identify the competency characteristics of project managers, this paper reviews a large number of project management materials and conducts an in-depth analysis of the work of project managers through a combination of three methods: searching and organizing literature on project managers, interviewing corporate leadership and project managers and distributing project management

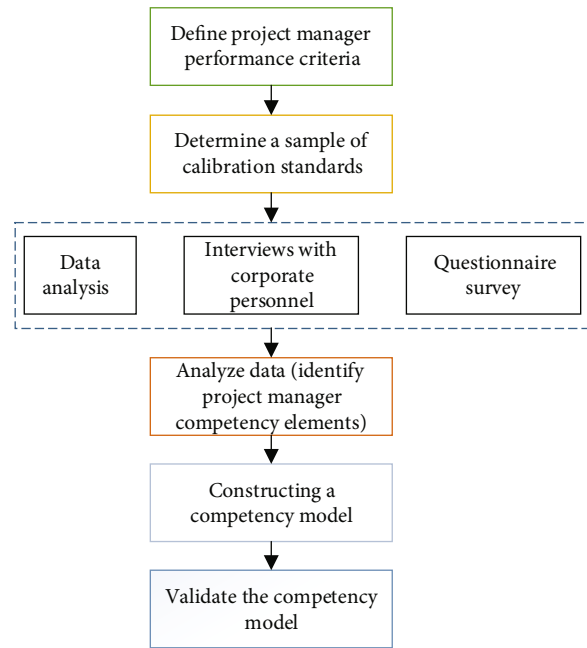


FIGURE 2: Structure of enterprise competency model construction.

stakeholder questionnaires, and then identifying the prevailing competency characteristics.

From the job analysis of the project manager position, it can be concluded that generally speaking, the project management cycle is long, and the project itself has a high degree of complexity and more unexpected situations in site management; the project manager, as the manager of a construction project, has different competency requirements from other positions. In order to ensure that the project can be carried out smoothly, the project manager should have relevant qualifications such as a class I or class II construction certificate and relevant project management experience. The project manager must be able to adapt to the project environment, have strong leadership and macrocontrol capabilities, be able to plan the project schedule in detail, and make real-time monitoring and adjustment according to the project schedule to ensure that the project construction goals can be achieved in accordance with the relevant procedures. At the same time, site management involves a variety of interest groups, including government personnel, supervisory agencies, suppliers, and team employees. The project manager needs to be able to coordinate the relationship between all parties and be able to handle all kinds of interpersonal relationships with ease. For the completion of a construction project, the project manager should have distinctive leadership qualities and personal charisma to bring the team together, develop subordinates, and facilitate teamwork. At the same time, the project manager should be able to take the initiative to meet the challenges of a complex project construction environment and be able to take decisive decisions and necessary actions in case of unexpected problems.

Through a combination of job analysis and theoretical research and research interviews, 25 project manager competency characteristics were initially obtained, in order to enhance the relevance of the project manager competency

TABLE 2: Project manager competency characteristics.

Competence characteristics	Specific competency profile content
Plan making	Develop the implementation plan of the whole project, have the ability to coordinate the development of the whole project, have a clear and clear planning of the project progress and resource allocation.
Control and adjustment	Ability to monitor the project in real time, accurately grasp the progress of the project, timely correction of deviations, to ensure that the project can be completed according to schedule.
Teamwork	Able to set up a complete team in project management to achieve complementary strengths, people do their part, and can play the maximum effectiveness of the team.
Systematic decision-making	The project decision-making process can have a systematic thinking, comprehensive and systematic consideration of the problem, and can make the best decision in a timely manner.
Risk prevention and control	Facing the complex scenarios of engineering projects, the team has a strong awareness of risk prevention and control and the ability to deal with risks.
Pioneering innovation	Facing different real-life problems in engineering projects, able to develop new ideas, new methods, and new skills to solve problems.
Dedication to work	Facing the complex environment of engineering projects, they can identify with their own profession, accept the various situations in engineering projects, and be willing to contribute.
Responsibility	In the process of engineering project management, should be able to the project, the customer and staff have a high sense of responsibility, to be able to take responsibility.
Fairness and impartiality	The core of project management is coordination, for the project management site of various types of emergencies, in the process of handling fair and just, with convincing moral quality.
Self-confidence	Maintain confidence in project management and be able to maintain a high level of conviction in case of conflicts and be able to motivate the surrounding staff to maintain a high level of confidence.
Behavioral initiative	Proactive in completing tasks and exploring better solutions and ways of working.
Thoughtfulness	Good at analyzing problems and finding solutions in complex events.
Learning ability	The project manager should have strong continuous learning ability to adapt and learn in different projects for different technical points and different management needs.
Constructor qualification	Possess a construction engineer qualification. (class I, class II)
Professional level	Have all kinds of management skills and professional skills required in the construction process of engineering projects, and have the ability to master the construction site skillfully.
Work experience	Project managers need to face complex engineering project management characteristics and should have rich work experience and project management experience.

model and ensure that the competency model can be effectively applied in practice.

In order to enhance the relevance of the project manager competency model and ensure that the competency model can be effectively applied in practice, the characteristics that are not highly relevant to enterprise project management were purposefully removed, and the final project manager competency characteristics were determined by collecting, refining, and summarizing 16 characteristics (as shown in Table 2).

*3.2.2. Project Manager Competency Model.* Project management is different from other business management in that the object of management is a project, covering various aspects such as construction decision-making, construction management, internal and external project coordination, and process control and claims management for that project, so the required characteristics of the project manager are extremely prominent, and in the case of project management, every link and element of the whole process of project management is related to the decision-making and competence of the project

manager. Therefore, the factors of the competency characteristics of project managers are all related. In order to construct the competency model, the competency characteristics screened in the previous subsection need to be analyzed, and the method of principal component factor analysis is chosen in this paper, mainly because there are too many kinds of competency characteristics, and it is necessary to do dimensionality reduction, and the factor analysis can divide the competency characteristics of project managers into several major categories, which is convenient for better application. The factor analysis can classify the competency characteristics of project managers into several major categories, which can facilitate better practice in application.

The human resource managers, project managers, project-related employees, and engineering management experts involved in the project management process in a city were selected to score the competency characteristics that had been screened for importance, and the scores were obtained according to 1-5, with 1 being the least important and 5 being the most important.

TABLE 3: Rotated component matrix.

Component matrix after rotation <sup>a</sup>	Components			
	1	2	3	4
Risk prevention and control				
System decision-making	0.883			
Control adjustment	0.840			
Plan development	0.831			
Professional level	0.762			
Teamwork	-0.664			
Fairness and impartiality	0.626			
Pioneering and innovative		0.888		
Responsibility		0.864		
Love for work and dedication		-0.858		
Thoughtfulness		0.786		
Self-confidence		0.755		
Work experience			-0.871	
Constructor qualification			0.669	
Behavioral initiative				0.828
Ability to learn				0.781

When conducting principal component factor analysis, the first thing to consider is that the 16 factors that have been screened have strong correlations with each other, and then, the representative categorical factor variables are constructed from the original variables that have been obtained. Therefore, it is necessary to test and judge the scoring results of the 16 project manager competency factors. The Bartlett's sphericity test and the KMO test are commonly used in scientific research. This paper uses SPSS software to input the final scoring results, and the results of KMO and Bartlett's test are shown in Table 3. From the test results, we can see that the KMO value is 0.785, and according to the criteria given by statistician Kaiser, in general,  $KMO > 0.9$  is very suitable for factor analysis;  $0.8 < KMO < 0.9$  is suitable for analysis; 0.7 or above can basically be analyzed, so further factor analysis can be conducted.

The first category includes "risk prevention and control," "systematic decision-making," "program alignment," "program development," "professionalism," "teamwork," and "fairness." This type of competency characteristics can be seen mainly related to project site management; these characteristics directly reflect the actual work of the project manager's ability to do all kinds of coordination, plan adjustment, and staff teamwork in complex projects, while the risky nature of the project leads to the ability to prevent and control risks is also an important ability of site management, which can be classified as such as project manager's "project management capability."

The second category includes "innovation," "responsibility," "dedication," and "thoughtfulness," and these competency characteristics are mainly related to the personal qualities of the project manager, which can be the basis for attracting employees to work together in project management.

The third category includes "work experience" and "builder's qualification," which are two competency charac-

teristics that can be seen in a superficial way and can be quantified. In particular, work experience can visually reflect the project manager's on-site proficiency, which can be classified as the "professional qualification characteristics" of the project manager.

The fourth category includes "behavioral initiative" and "learning ability," which are two competency characteristics that are conducive to the continuous improvement and development of project managers. These can be classified as "personal development characteristics" of project managers.

**3.2.3. Project Manager Competency Model Application Methodology.** The project manager competency model is shown in Table 4.

Projects are unique and distinctive, and no project is exactly the same. Therefore, after the project manager competency model is constructed, the weights should be set for different project characteristics in the actual application, and finally, a more scientific and comprehensive evaluation should be made to determine the most suitable candidate. For example, overseas projects require a high level of English and other professional skills for project managers, and they need to constantly adapt to the new environment to make decisions, so the weights of "professionalism," "innovation," and "behavioral initiative" are assigned more. Therefore, the weights of "professionalism," "innovation," and "behavioral initiative" are assigned higher. Another example is that a traditional engineering construction project may be the most efficient for the project manager to complete the corporate goal, so the relevant project "work experience," "plan adjustment," and "dedication to work" are characteristics of high weight distribution. In the process of determining job candidates, due to the changing weight coefficients for different projects, in order to avoid the influence of subjectivity and to achieve a combination of qualitative and quantitative, we can choose the fuzzy comprehensive evaluation method to determine.

It is usually possible to determine the factor domain  $U$  of the project manager candidate to be judged and to determine the domain  $V$  of the rating scale, to make a single-factor judgment of the competency characteristics, and to derive a judgment matrix  $R_i$ . After that, weights were assigned to the project characteristics based on the importance of each factor, and the weight vectors of the judging factors were determined  $A_i = (a_1, a_2, \dots, a_n)$ , according to the competency model proposed in this chapter.

Thus, the results of the first-level integrated assessment are

$$B_i = A_i \circ R_i. \quad (1)$$

After that, it is determined that the secondary judgment weight vector is  $A$ , and finally, the fuzzy comprehensive evaluation results of the project manager position candidates are obtained.

$$B = A \circ R. \quad (2)$$

The best candidate for the project manager can be determined by normalization according to the principle of maximum affiliation.

TABLE 4: Project manager competency model.

Competency categories	Competency characteristics	Competency categories	Competency characteristics
Project management competencies	Risk prevention and control	Personal quality characteristics	Pioneering and innovative
	System decision-making		Responsibility
	Control adjustment		Love for work and dedication
	Plan development		Thoughtfulness
	Professional level		Self-confidence
	Teamwork		
	Fairness and impartiality		
Professional qualification characteristics	Work experience Constructor qualification	Personal development characteristics	Behavioral initiative Ability to learn

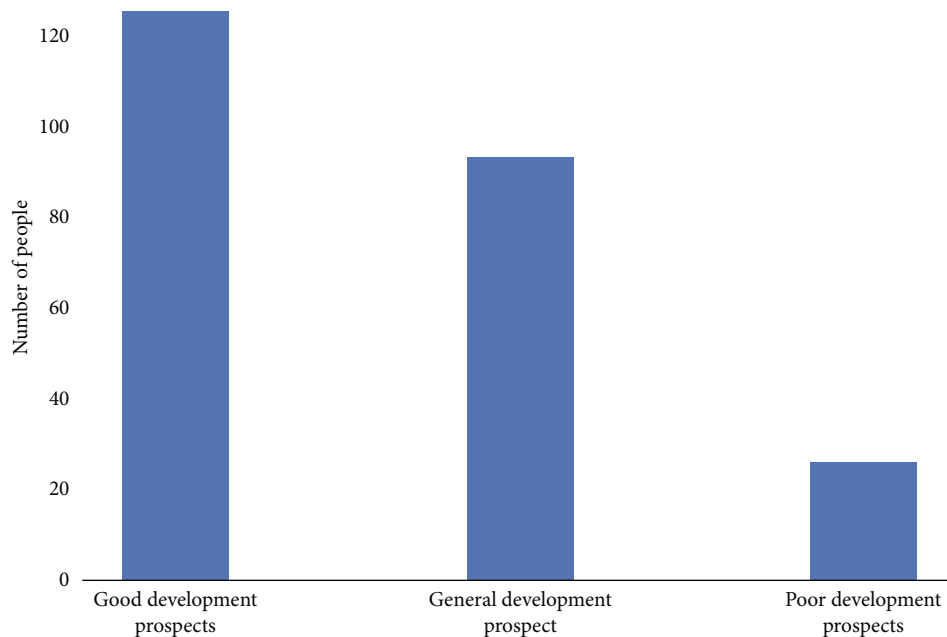


FIGURE 3: An employee's awareness of the long-term development status of the enterprise.

### 4. Case Study

Based on the consideration of reliability and validity, 300 copies of the questionnaire were developed for a group of employees of a company, combining the above-mentioned principles and characteristics of questionnaire design, and the questionnaire was distributed and collected by each department in proportion to the number of employees under the review of the human resource department. The questionnaires were filled in anonymously and independently; 300 copies were distributed, and 253 copies were collected. 7 research samples whose negative responses affected the validity of the questionnaires were excluded from the data collation (repeated mechanical selection of obvious, large vacancies in the answer items), and 246 valid questionnaires were obtained for further data collation and analysis. The valid questionnaire providers covered all departments of the company more evenly. In the quantifiable reliability test, question numbers 5-25 totaled 21 items, with a Cronbach's alpha coefficient of 0.866 and a validity test result

KMO value of 0.831. In summary, the test results show that the content presented by the questionnaire is in line with the reliability and validity requirements of this survey.

4.1. Statistical Analysis. Summarizing the basic situation of HRM in this enterprise is derived as follows.

4.1.1. Investigation of Employees' Departmental Structure and Satisfaction with the Company as a Whole. As shown in Figures 3 and 4, summarize the company's employees' views on departmental structure, awareness of the enterprise's HRM system, and other aspects.

The results of this survey show that more than half of the 246 valid questionnaires collected have a positive attitude toward the development prospects of the enterprise. In recent years, relying on the policy dividends of the industry environment, the management and operation of the enterprise have continued to develop and expand in all aspects, and the employee group is more recognized and assured of the development situation of the enterprise. There are 98



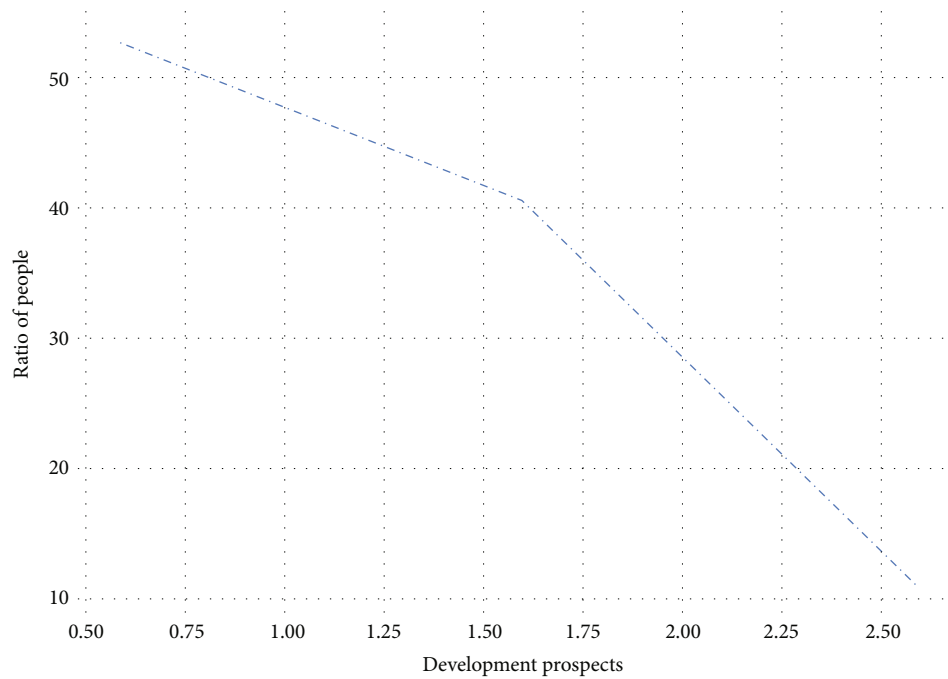


FIGURE 4: Changes of an employee's awareness with development prospects.

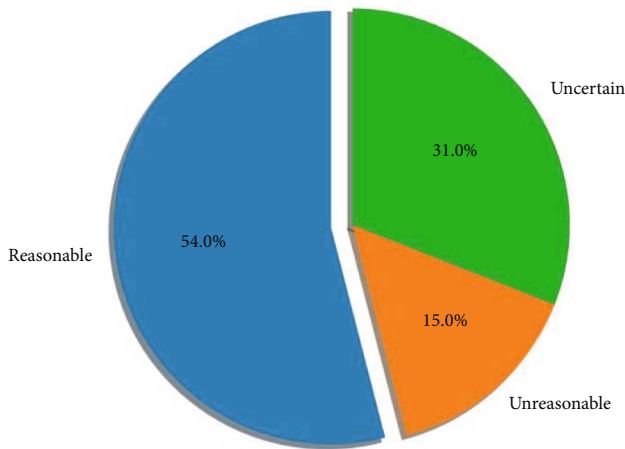


FIGURE 5: Opinions on the department structure of employees in a company.

TABLE 5: Survey on the satisfaction of compensation and benefits of an enterprise.

Salary satisfaction	Satisfied	Fair	Dissatisfied
Number of employee votes	54	144	48
Percentage	22.21	58.76	18.9

people who think that the prospect is general, and another 23 people are not optimistic about the overall development of the enterprise in the future.

The results of the feedback alone (see Figure 5 and Table 5) and the proportion of employees who think the departmental structure is reasonable-unreasonable-uncertain

are 134:34:78; most of the employees are positive about the reasonableness of the company's departmental structure. 54% of the interviewees agree with the reasonableness of the departmental structure, 31% retain their views, but there are still 15% of employees who question the attitude.

Table 6 shows the statistics of employees' views on departmental performance and then combined for analysis.

From the questionnaire survey, the overall feeling of employees on the current stage of a company's interdepartmental fulfillment of responsibilities is relatively poor, 38.7% of employees believe that there is frequent shifting of responsibilities between departments, and 44.6% of employees are not sure whether there is mutual shirking of responsibilities. In relation to the statistical results in Figure 4, the data shows that employees are satisfied with the company's departmental structure and hierarchical settings, but the percentage of positive evaluation of the company's departments' performance of responsibilities is too low. This indicates that the company's organizational structure should be properly sorted out and optimized within the original framework, so as to make the department's authority and responsibility more clear. The old organizational structure that cannot keep up with the new stage of the enterprise is like the aging parts of the machine; the human resource department is like the lubricant that reduces the friction between the parts and makes the machine run normally.

4.1.2. Survey on Satisfaction Related to Compensation System, Training and Development, and Spiritual Motivation. As shown in Tables 7–9, the data results of the three surveys on compensation, training, and spiritual encouragement are relatively convergent, with the number of people who are clearly satisfied and dissatisfied basically

TABLE 6: Perceptions of employees' departmental responsibilities in a company.

Perception of the phenomenon of kicking the can down the road between departments	Yes	Not sure	No
Number of employee votes	97	108	41
Percentage	38.7	44.6	16.5

TABLE 7: Survey on employee training of a company.

Training status	Satisfied	Fair	Dissatisfied
Number of employee votes	51	151	44
Percentage	20.32	61.75	17.87

TABLE 8: Survey on a company's spiritual encouragement for employees.

Level of spiritual encouragement emphasis	Satisfied	Fair	Dissatisfied
Number of employee votes	55	144	47
Percentage	22.77	58.12	19.10

TABLE 9: Survey on the reasonableness of the ratio of departmental posts in an enterprise.

Reasonableness of staffing ratio	Reasonable	Fair	Unreasonable
Number of employee votes	46	94	106
Percentage	18.28	38.59	43.02

equal, and the middle part of the average feeling is prominent. The proportion of employees with positive evaluation of salary is low, accounting for only 22.36%. Another 58.94% of the proportion of respondents in the middle of the attitude, which indicates that the overall satisfaction of employees at a certain salary level is not enough, prompting the company to pay reasonable attention to assess the welfare of employees, pay system. The survey data shows that the company personnel-related training work should also be optimized and strengthened and actively expand upward channels for employees. Improve employee satisfaction in terms of self-progress and value realization. Further analysis found that the current economy is in a period of great development, the country's economic and social transformation, and there are industry differences in the way employees in different industries view their own treatment. While the capital snowball is getting bigger and bigger, the overall happiness index has not increased significantly year-on-year. This undoubtedly points to the barrenness and lack of spirituality in the golden age. In addition to material incentives and self-improvement incentives, it is suggested that the company should increase the deep plowing of corporate culture and effectively carry out spiritual incentives to enhance the happiness and satisfaction of employees at work. And with the change of the application degree of human resource management system, employees have very different working feelings, as shown in Figure 6.

*4.1.3. Survey on the Reasonableness of Departmental Staffing Ratio.* Table 9 shows that nearly half of the staffing ratios are unreasonable, and only 18.29% of the staffing ratios are rea-

sonable, indicating that it is very common for employees to feel that the internal staffing of a company is not ideal. The analysis of the actual situation of the company shows that due to the accelerated expansion in recent years, the business volume has increased sharply, coupled with the establishment of foreign branches, the mobility of personnel around the strengthening, the demand for various departments for each position has increased sharply, and the traditional recruitment methods can not continue. In addition to the fixed existing campus recruitment, social recruitment (webpage referral and headhunting recommendation), and internal promotion methods, we can also use new technology to develop a variety of recruitment models, such as the legal development of the use of big data to optimize the recruitment model and improve recruitment efficiency. According to the evaluation results of our system on employees' personal abilities, as shown in Figure 7, the results confirm our basic theory.

The industry in general has the contradictory phenomenon of "difficult employment" and "difficult recruitment." The professional field is becoming more and more demanding on the educational requirements of the talent, and the educational requirements are good in the long-term development of enterprises, but in each stage of development, ignore the reality of the gap between the market situation and the actual needs of the company at the moment, and put the cart before the horse only academic theory, which is not desirable. In the development process of the special period, the framework of the system needs to develop a flexible talent recruitment strategy, to adapt to the current needs of the company.

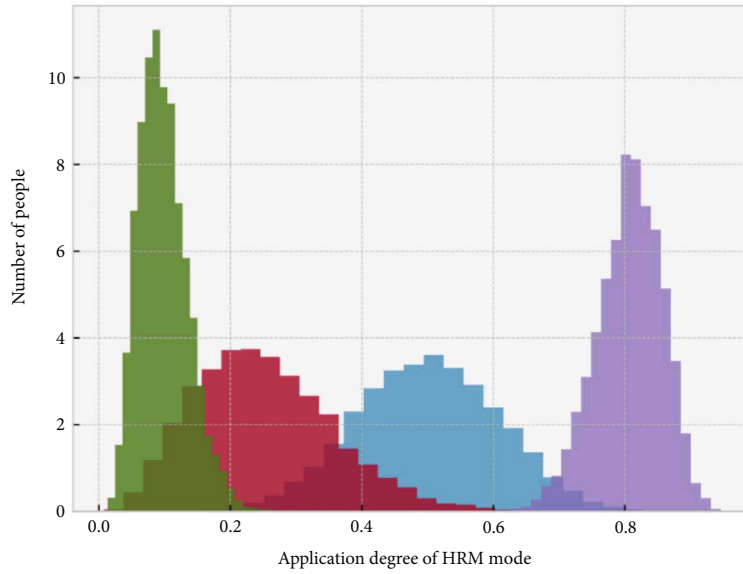


FIGURE 6: Changes in the application degree of human resource management system.

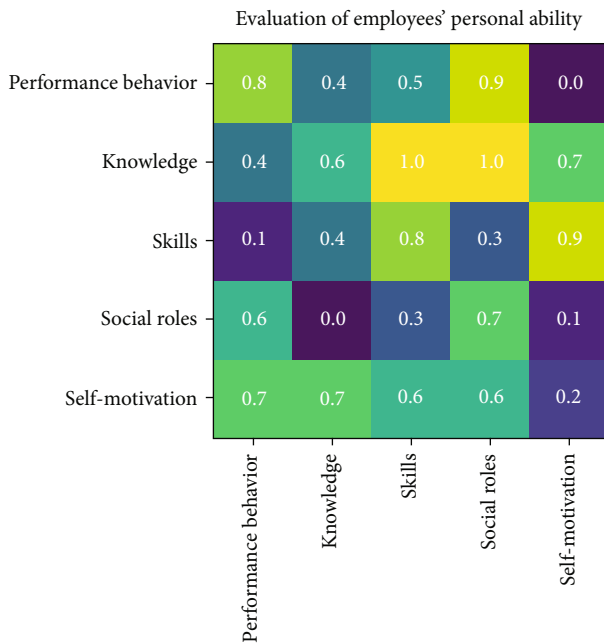


FIGURE 7: Results of the evaluation of employees' personal ability.

TABLE 10: Survey on the design of performance appraisal index of an enterprise.

Reasonableness of existing assessment indexes	Reasonable	Fair	Unreasonable
Number of employee votes	51	151	44
Percentage	20.28	61.77	17.89

4.1.4. Investigate the Performance Appraisal Situation. Through Tables 10–12, it is found that some companies have adopted the method of eliminating existing employees with low education and introduced a strict evaluation system to assess existing workers, and under great pressure, some

TABLE 11: Survey on the degree of objectivity of performance appraisal in a company.

Satisfaction with objectivity of appraisal results	Satisfied	Fair	Dissatisfied
Number of employee votes	44	132	70
Percentage	17.99	53.32	28.45

TABLE 12: Survey on the incentive effect of performance appraisal in an enterprise.

Motivation of performance appraisal	Satisfied	Fair	Dissatisfied
Number of employee votes	56	144	46
Percentage	22.41	59.36	18.22

employees have developed the idea that they cannot serve in the company for a long time, thus losing confidence in their work and future development. This survey found that the company's existing performance appraisal design indicators are not reasonable enough, and the results are not very objective. As a result of the interaction, the desired motivation of performance appraisal is not well reflected. Only a small percentage of employees approve of the existing company's performance appraisal. This survey result fully illustrates that the physical pressure and mental pressure of employees are high. The HR management of this company needs to reevaluate the reasonableness of the appraisal index, the fairness of the process, and the objectivity of the results in the performance management module, focusing on how the appraisal can play a proper motivational role. Following this, an enterprise performance management is optimized.

4.1.5. Survey on the Service Level of HR Department. As analyzed in Tables 13–15, the employees' feelings about the recognition of a human resource department's work situation is

TABLE 13: Survey on the business situation of a company's resource management department.

Do you know the business	Yes	Fair	No
Number of employee votes	52	143	51
Percentage	50.98	58.24	20.71

TABLE 14: Survey on the service quality of an enterprise resource management department.

Is the service quality satisfactory	Yes	Fair	No
Number of employee votes	60	132	54
Percentage	24.34	53.21	22.37

TABLE 15: Survey on crisis management in an enterprise resource management department.

Efficiency in dealing with problems	Yes	Fair	No
Number of employee votes	59	146	41
Percentage	23.57	59.77	16.65

not good or bad and is more prominent and common. On this basis, the percentage of those who express satisfaction is slightly higher than those who express dissatisfaction. It can be seen that the overall service level of the company's human resource department is medium to high. The HR department does not know enough about the business situation of other departments, and the service quality of the department has more room for improvement. This requires the relevant personnel of the department to improve relevant knowledge and skills, accumulate experience and skills, strengthen relevant professionalism while not working behind closed doors, strengthen communication with other departments in the work process, and dynamically grasp the needs of individual employees and work and psychological changes, in order to improve the comprehensive ability to proactively identify problems and solve them. More efforts can be made to increase the frequency of communication, improve communication methods, and improve the quality of communication.

## 5. Conclusion

In the context of the new era of intelligence, not only have products, technology, and corporate culture changed dramatically but also human resource management is also facing changes. The integration of emerging technologies such as artificial intelligence into the human resource management system has liberated human resource managers and made the management system of enterprises clearer and more complete. At the same time, for the process of HR management, it reduces labor costs, provides a more suitable labor environment for each employee with more suitable conditions, and also makes each employee get a more suitable job position, which contributes to the harmony and concord of corporate labor relations and the long-term development of corporate cohesion. The work of the enter-

prise's human resource department is more smooth and orderly, and its management ability and competitiveness are significantly improved. The impact of emerging technologies on HR management and organizational behavior is bound to intensify, and companies should innovate ideas, integrate new ways and methods, upgrade traditional HR management models, seize opportunities to promote HR management changes, and make emerging technologies such as artificial intelligence inject new vitality into modern HR management. The traditional HRM model can hardly adapt to the needs of the new era of company development and needs innovation and breakthrough. The company needs to fully understand the current situation of HRM, analyze the existing problems, find breakthroughs and entry points, seek reform measures, continuously improve and manage HRM, and promote the healthy development of the company and its people.

## Data Availability

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

## Conflicts of Interest

The author declares that there are no conflicts of interest regarding this work.

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