MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

SUMY NATIONAL AGRARIAN UNIVERSITY

ECONOMICS AND MANAGEMENT FACULTY

Public management and administration department

QUALIFICATION WORK

education degree - Master

on: **«MANAGEMENT OF INNOVATION ACTIVITIES WITHIN ENTERPRISES »**

Completed: student of
specialty 073 Management
EP «Administrative management»

Pang Chongnan

Superviser ***Nataliya Stoyanets***
D.E.S., Professor

Reviewer _____
position

Sumy - 2025

SUMY NATIONAL AGRARIAN UNIVERSITY

Faculty Economics and Management
Department Public management and administration

Education degree *«Master»*
Speciality *073 Management EP «Administrative management»*

Approved:
Head of Department _____
«____» _____ 2023

TASK

on qualification work for student

Pang Chongnan

1. Topic of Qualification work: Management of innovation activities within enterprises

2. Base of research at Yantai Nanshan fashion sci-tech Co.,LTD

Superviser D.e.s. Profesor Nataliya Stoyanets

approved by the university order dated _____ *№* _____

3. Deadline for student completed project (work) _____

4. Background to the project (work):
primary and consolidated documents, registers of synthetic and analytical accounting, statutory and founding documents, financial and statistical reporting of the investigated state institution, legislative and regulatory acts on the activities of state bodies, monographs, professional scientific articles and reports at international scientific and practical conferences on management issues development of the organization's personnel

5. Contents of settlement and explanatory notes (the list of issues to develop):

to investigate the theoretical and methodological foundations of innovation activities management;
provide organizational and economic characteristics of Yantai Nanshan fashion sci-tech Co.,LTD;
to provide an analysis of the state of management of the of innovation activities of the enterprise;
carry out an assessment of the company's innovation and the economic consequences of its activities in the context of management;
analyze the state of innovation development management, identify shortcomings in Yantai Nanshan fashion sci-tech Co.,LTD;
propose measures to improve the effectiveness of innovation development management at Yantai Nanshan fashion sci-tech Company LTD;
formulate conclusions.

6. Date of assignment: _____

CALENDAR PLAN

№	Name of the diploma project's stages	Dates of project stages' performance	Note
1	Definition and approval of the thesis, preparation of the plan - schedule of work		
2	Selection and analysis of literary sources, the preparation of the first theoretical chapter		
3	Preparation and presentation of draft of the first chapter of the thesis		
4	Collection and processing of factual material, synthesis analysis of application issues in the enterprise		
5	Making the theoretical part of the thesis, summarizing the analytical part		
6	Design options improve the research problem		
7	Completion of the project part of the thesis, design chapters		
8	Update of data for 2021, 2022, 2023 and completion of analytical and design sections of the qualification work		
9	Previous work and its defense review		
10	Checking the authenticity of the thesis		
11	Deadline for student completed the thesis		
12	Defense of the thesis		

Student _____
(signature)

Supervisor _____ _____

(signature)

Checking the authenticity conducted

_____ _____

Thesis allowed for defense

_____
(signature)

АНОТАЦІЯ

Пан Чуаннань. Управління інноваційною дільністю підприємств. Кваліфікаційна робота за спеціальністю 073 «Менеджмент» ОПП «Адміністративний Менеджмент», Сумський національний аграрний університет, Суми, 2025. – Рукопис.

У кваліфікаційній роботі досліджуються теоретико-методологічні основи управління інноваційною діяльністю підприємства. Шляхом теоретичного аналізу та емпіричного дослідження виявлено прямий вплив організаційних факторів інтрапренерства на ефективність технологічних інновацій та посередницьку роль управління знаннями. Виявлено, що такі організаційні фактори, як управлінська підтримка, організаційна культура та винагорода, можуть не тільки безпосередньо сприяти досягненню ефективності технологічних інновацій, але й опосередковано підвищувати ефективність технологічних інновацій за рахунок позитивного ефекту управління знаннями. Результати даної роботи розкривають прямий вплив організаційних факторів інтрапренерства на ефективність технологічних інновацій та механізм опосередкованого впливу через управління знаннями. Зокрема, такі організаційні чинники, як підтримка менеджменту, організаційна культура та винагорода, не лише безпосередньо впливають на ефективність технологічних інновацій, але й ще більше підвищують ефективність технологічних інновацій завдяки посередницькій ролі управління знаннями. Цей висновок є теоретичною основою та практичним керівництвом для підприємств щодо покращення продуктивності технологічних інновацій через інтрапренерство та управління знаннями.

Робота присвячена Yantai Nanshan Zhishang Technology Co., Ltd., детально обговорює режим управління, практичний досвід та інноваційний ефект її внутрішньої інноваційної діяльності, аналізує її інноваційну діяльність у цифровій трансформації, співробітництві між галуззю та університетом та наукових дослідженнях, розбудові ешелону талантів та інших аспектах, підсумовує її успішний досвід і проблеми, а також висуває пропозиції щодо оптимізації для підприємств у тій же галузі. Результати показують, що організаційні фактори, такі як підтримка керівництва, організаційна культура та винагорода, відіграють значну роль у сприянні продуктивності технологічних інновацій, а управління знаннями відіграє часткову посередницьку роль у цьому процесі. Підприємства повинні надавати значення поєднанню внутрішнього підприємництва та управління знаннями, підвищувати ефективність технологічних інновацій шляхом оптимізації організаційного середовища та системи управління знаннями, щоб зберегти конкурентну перевагу в умовах жорсткої ринкової конкуренції.

Ключові слова: управління, менеджмент, іноваційна діяльність, ефективність, цифрова трансформації.

SUMMARY

Pang Chongnan. I Management of innovation activities within enterprises. Qualification work on specialty 073 "Management" SPP "Administrative Management", Sumy National Agrarian University, Sumy, 2025. - Manuscript.

The qualification work explores the theoretical and methodological foundations of enterprise innovation management. Through theoretical analysis and empirical research, the direct impact of organizational factors of intrapreneurship on the effectiveness of technological innovations and the mediating role of knowledge management are revealed. It is found that such organizational factors as management support, organizational culture and reward can not only directly contribute to the achievement of the effectiveness of technological innovations, but also indirectly increase the effectiveness of technological innovations due to the positive effect of knowledge management. The results of this work reveal the direct impact of organizational factors of intrapreneurship on the effectiveness of technological innovations and the mechanism of indirect influence through knowledge management. In particular, organizational factors such as management support, organizational culture and reward not only directly affect the effectiveness of technological innovations, but also further increase the effectiveness of technological innovations due to the mediating role of knowledge management. This conclusion provides a theoretical basis and practical guidance for enterprises to improve technological innovation performance through intrapreneurship and knowledge management.

This paper focuses on Yantai Nanshan Zhishang Technology Co., Ltd., discusses in detail the management mode, practical experience and innovation effect of its internal innovation activities, analyzes its innovation activities in digital transformation, industry-university cooperation and scientific research, talent echelon construction and other aspects, summarizes its successful experiences and challenges, and puts forward optimization suggestions for enterprises in the same industry. The results show that organizational factors such as management support, organizational culture and reward play a significant role in promoting technological innovation performance, and knowledge management plays a partial mediating role in this process. Enterprises should attach importance to the combination of internal entrepreneurship and knowledge management, increase the efficiency of technological innovation by optimizing the organizational environment and knowledge management system in order to maintain a competitive advantage in the face of fierce market competition.

Keywords: governance, management, innovation activity, efficiency, digital transformation.

CONTENT

INTRODUCTION

Actuality of theme. Under the background of today's global economy, the competition of enterprises is becoming more and more fierce, and technological innovation has become the key to enhance the competitiveness of enterprises. As an important form to stimulate the creativity of employees, intrapreneurship can effectively promote the technological innovation activities of enterprises. This paper discusses the strategy and practice of enterprise management innovation activities. The study found that innovation management is critical to business development, enhancing competitiveness and promoting sustainable growth. This paper analyzes the types, characteristics and management processes of innovation activities, and discusses the key elements such as organizational structure, culture, resource allocation and risk management. Through the case analysis of Apple and Huawei, the innovation management experience of successful enterprises is summarized. Finally, the paper puts forward some suggestions on improving innovation management system, cultivating innovative talents and building innovation ecosystem, which provides theoretical guidance and practical reference for enterprises to effectively manage innovation activities.

The state of studying the problem. Considerable attention has been paid to the study of issues related to innovation management in the works of many domestic scientists and their foreign colleagues, in particular such as: Many Chinese scholars and colleagues have given considerable attention. especiallyZhang Mingyuan, Li Jingyi. Wang, L., & Chen, X. Chen Yuanfang.Smith, J., & Liu Zhihui, Zhao Minghua and others.

The purpose of the research is a theoretical and methodological generalization to Yantai Nanshan Zhishang Technology Co., Ltd., on enterprise innovation management and to develop practical suggestionsin.

To achieve the set goal, the following tasks were defined and performed:

- to investigate theoretical approaches to the management of the efficiency of innovative activities of information sector enterprises;

- to provide an organizational and economic characteristic of the subject of research;

- to consider development trends and analyze the state of management of innovative activities of Yantai Nanshan Zhishang Technology Co., Ltd;

- to assess the company's innovative activities in the context of management;

- to propose measures to improve the efficiency of management of innovative activities of Yantai Nanshan Zhishang Technology Co., Ltd.

The subject of the study is a set of theoretical, methodical and practical aspects of managing innovative activities of the company's.

The practical significance of the obtained results lies in the development and scientific substantiation of recommendations regarding the areas of management of the company's personnel development. The materials of the studies carried out in the qualification work were transferred to the Yantai Nanshan Fashion Technology Co., LTD.

The following research methods were used when writing the qualification work: methods of scientific analysis, synthesis, induction, deduction, logical analysis, system approach, etc. Methods were also used to solve the identified research tasks: monographic - when studying literary sources, structural analysis, comparative analysis, innovative management practices, and others.

Information base. The sources of information for writing the qualification work were regulatory and legislative acts, founding documents, financial statements of Yantai Nanshan Zhishang Technology Co., Ltd; scientific articles, materials of conferences, works of domestic and foreign scientists.

Approbation of the results of the qualification work. The provisions of the qualification work were reported by the author at the scientific conference and confirmed by the relevant certificate:

1. Pang Chongnan, Nataliya Stoyanets Management of innovation activities within enterprises Матеріали Міжнародної науково- практичної інтернет конференції «Майбутнє – аудит» (м. Кривий Ріг, 15 січня 2024 р)

2. Chongnan Pang, Stoyanets N. RESEARCH ON THE MANAGEMENT OF

ENTERPRISE INTERNAL INNOVATION ACTIVITIES Матеріали міжнар. наук.-практ.інтернет-конф., «Підприємництво та бізнес-адміністрування у воєнний час: сучасні виклики, тренди та трансформації» (Харків,01 – 28 лютого 2024 р.)

Structure and scope of work. The qualification work consists of an introduction, three sections, conclusions, a list of used sources from 33 items. The main text is laid out on 75 pages of computer text, the work contains 9 tables and 18 figures.

SECTION 1

THEORETICAL ANALYSIS OF THE STUDY OF THE EFFECTIVENESS OF THE INNOVATION ACTIVITIES WITHIN ENTERPRISES

In the context of global economic integration and rapid development of science and technology, technological innovation has become a key means for enterprises to enhance competitiveness and achieve sustainable development. However, technological innovation itself is highly complex and uncertain, which leads to many risks. These risks not only include the feasibility and market acceptance of the technology itself, but also involve various challenges such as financial, management and external policy environment.

For companies like Nanshan Zhishang, technological innovation is an important driving force to maintain its leading position in the industry. However, if the risks in the process of technological innovation are not effectively managed, they may lead to project failure, waste of resources, and even affect the overall strategic advancement of the enterprise. Therefore, it is of great practical significance for Nanshan Zhishang to construct a set of scientific and perfect risk management system for technological innovation.

In recent years, the research on the risk management of technological innovation in the academic and practical circles has gradually deepened. Relevant research shows that technological innovation risks mainly come from internal technology, management and financial risks as well as external policy and market risks. At the same time, risk assessment methods such as analytic hierarchy process and fuzzy comprehensive evaluation have been widely used in technological innovation risk management. In addition, with the development of digital technology, enterprise technology innovation risk management is also constantly exploring how to improve risk identification and response capabilities through big data, artificial intelligence and other means.

In the practice of enterprises, the macro pre-control countermeasures of technological innovation risk management (such as improving the legal system and financial policy support) and the micro pre-control countermeasures (such as establishing a correct risk attitude and establishing a risk management mechanism) have been proved to be an important means to effectively reduce risks. However, for the specific needs of enterprises such as Nanshan Zhishang, it is still necessary to further combine their industry characteristics and the actual situation of enterprises to build a more targeted risk management system. [1]

To sum up, this study aims to build a set of technological innovation risk management system suitable for its own development by analyzing the risk characteristics of Nanshan Zhishang's technological innovation process and combining relevant theoretical and practical achievements at home and abroad, so as to provide macro-guidance for technological innovation activities of enterprises and help enterprises achieve high-quality development in the complex and changeable market environment.

In recent years, Nanshan Zhishang has realized the leap from traditional manufacturing to intelligent and digital transformation by building the "six modernization" operation and management mode driven by number intelligence and quality. [3] The model covers a full range of innovation from production to management, including the introduction of intelligent architecture, intelligent equipment and intelligent technology, as well as innovative practices such as precision marketing, collaborative design and agile supply. In addition, Nanshan Zhishang has also established a sound innovation incentive mechanism, and fully mobilized the innovation enthusiasm of grass-roots employees by formulating an innovation results-oriented assessment system.

However, the management of internal innovation activities is not accomplished overnight, and it requires systematic layout in strategic planning, organizational structure, talent management and cultural construction. Starting from the innovation practice of Nanshan Zhishang, this paper will deeply discuss the strategies and methods of internal innovation management, analyze its successful

experience and challenges, and put forward targeted improvement suggestions, in order to provide useful reference for other enterprises in innovation management.

Through this study, we expect to reveal the key elements that enterprises need to pay attention to in the process of innovation management, further improve the innovation management system, and promote enterprises to achieve high-quality development in the fierce market competition.

Especially in the current complex and changeable global economic situation, how to cope with the rapid changes in the external environment through innovation and maintain competitive advantage has become an urgent problem to be solved. Nanshan Zhishang's innovation practice not only shows its leading position in the industry, but also provides valuable experience and inspiration for other enterprises. Through the in-depth analysis of the innovation activities of Nanshan Zhishang, we can better understand the complexity and challenge of the internal innovation management of enterprises, so as to provide theoretical support and practical guidance for enterprises to formulate more scientific and reasonable innovation management strategies. Therefore, this study not only has theoretical value, but also has important practical significance.

1.1.2 Research significance

Under the background of global economic integration and rapid development of science and technology, enterprises are facing unprecedented opportunities and challenges. Innovation, as the core driving force to promote the sustainable development of enterprises, has become a key factor for enterprises to enhance competitiveness and achieve sustainable development. [2] As a leading enterprise in the industry, Nanshan Zhishang has always regarded innovation as the lifeline of enterprise development, and has accumulated rich experience in the management of internal innovation activities.Concept and type of innovation

Enterprise innovation refers to the process of improving production efficiency, product differentiation or enhancing market competitiveness by introducing new technology, management method, business model or product design

in production and operation activities. Innovation theory mainly includes the following aspects:

1. Technological innovation

Technological innovation covers product innovation and process innovation, and is the core driving force to promote the development of enterprises. For example, Nanshan Zhishang has promoted its application in the field of robotics by developing ultra-high molecular weight polyethylene fibers. At present, the hot areas of global technological innovation include artificial intelligence, quantum computing, green energy and biotechnology. These technologies have not only changed the production mode of traditional industries, but also spawned a new industrial ecology.

2. Management innovation

Management innovation involves the optimization of organizational structure, incentive mechanism and management process. Nanshan Zhishang implements lean production management and intelligent upgrading, and improves production efficiency and product quality by optimizing internal management processes. Management innovation can also further enhance the operational efficiency of enterprises by introducing new management concepts and technological means, such as digital management tools.

3. Business model innovation

Business model innovation improves market competitiveness by changing the way enterprises interact with customers and suppliers. Through the "order production" and "advanced customization" model, Nanshan Zhishang meets the market demand of multiple varieties and fewer batches. This model not only improves customer satisfaction, but also enhances the enterprise's market adaptability.

4. Design innovation

Design innovation focuses on the appearance, user experience and functional layout of products to enhance the added value of products. By introducing cutting-edge design concepts and technologies, Nanshan Zhishang can create new textiles

that are both beautiful and practical. Design innovation is not only reflected in the appearance of the product, but also enhances the market competitiveness of the product by optimizing the functional layout and user experience of the product.

5. Market innovation

Market innovation Explore new markets or market segments and develop new sales channels. Nanshan Zhishang may develop customized products for specific consumer groups through in-depth analysis of market needs, and promote them through new sales channels such as e-commerce platforms or social media. This innovative approach helps companies better meet consumer demand and expand market share.

6. Service innovation

Service innovation enhances the customer experience by providing new services or improving existing services. Nanshan Zhishang may develop a comprehensive service solution to provide customers with full support from design to finished product. This innovative approach not only improves customer satisfaction, but also enhances brand loyalty.

7. Strategic innovation

Strategic innovation involves the adjustment of the company's overall strategic direction to adapt to market changes and long-term development. Nanshan Zhishang may reposition its brand to focus on sustainability and the use of environmentally friendly materials. This strategic adjustment helps enterprises to remain competitive in a rapidly changing market environment.

8. Collaborative innovation

Collaborative innovation through cooperation with other companies or research institutions to jointly develop new technologies or products. Nanshan Zhishang collaborates with top universities to jointly research the application of new materials in high-performance sports equipment. This mode of cooperation not only accelerates the research and development and application of technology, but also enhances the innovation ability and market influence of enterprises.

9. Environmental innovation

Environmental innovation focuses on the impact of a product or service on the environment and seeks ways to reduce negative effects. Nanshan Zhishang is committed to reducing waste and emissions in the production process to achieve green production. This innovative approach not only helps companies fulfill their social responsibilities, but also conforms to the global trend of sustainable development.

10. Cultural innovation

Fostering a culture of innovation within the company encourages employees to come up with new ideas and put them into practice. Nanshan Zhishang may set up an innovation fund to support employees' creative projects, thereby stimulating the innovation potential of the team. This kind of cultural innovation helps enterprises to form sustainable innovation ability and promote the long-term development of enterprises.

Through the above types of innovation, enterprises can comprehensively improve their competitiveness and adaptability, and achieve sustainable development.

3.1.3. Corporate culture and innovation atmosphere

· The connotation of people-oriented innovation culture

1. Respect individual differences

Each employee has a unique way of thinking, experience and skills. A people-centered innovation culture emphasizes respect for these differences and encourages employees to play to their strengths rather than requiring them to fit into a single working pattern. For example, some companies will tailor training programs for employees according to their interests and expertise to help them make greater breakthroughs in their areas of expertise.

This respect is also reflected in the inclusion of employees. The company accepts employees with different backgrounds and personalities to create a diverse team environment, thus inspiring more innovation.

2. Focus on employee needs

Enterprises not only pay attention to employees' work performance, but also pay attention to their career development and personal growth needs. For example, by providing flexible working hours, a comfortable working environment and abundant career development opportunities, employees feel that the company cares about them.

Through regular employee satisfaction survey and feedback mechanism, enterprises can timely understand the needs and expectations of employees, so as to adjust management strategies to better support employees' work and innovation activities.

3. Motivate employees to participate

A people-oriented innovation culture encourages employees to actively participate in the innovation process of the company. Enterprises provide innovative platforms and resources for employees, such as the establishment of innovation funds, open laboratories, innovation competitions, etc., to stimulate the enthusiasm of employees for innovation.

At the same time, by establishing a reasonable incentive mechanism, enterprises reward employees for their innovative achievements, including material rewards (such as bonuses, promotion opportunities) and spiritual rewards (such as honorary certificates, public commendations), so that employees can feel that their efforts have been recognized.

· The role of people-oriented innovation culture in promoting the innovation atmosphere of enterprises

1. Motivate employees to innovate

When employees feel the respect and care of the enterprise, they will be more willing to contribute their wisdom to the development of the enterprise. For example, Google is famous for its open and inclusive corporate culture, where employees can freely explore their interests in 20% of their working time. This people-oriented policy has greatly stimulated employees' innovation motivation and spawned many innovative products and services.

A people-oriented culture can also enhance the sense of belonging and loyalty of employees, making them more willing to work for the company for a long time and continue to invest in innovative activities.

2. Promote teamwork and collaborative innovation

In a people-oriented innovation culture, the relationship between employees is more harmonious and the team cooperation is closer. By organizing team building activities and cross-departmental exchanges, enterprises break down departmental barriers and promote communication and cooperation between employees from different backgrounds and professional fields.

For example, some companies set up cross-functional project teams to bring employees from different departments together on an innovation project. In this process, employees are able to think about problems from different angles, play to their respective strengths, and achieve collaborative innovation.

3. Foster an open and inclusive environment for innovation

This culture emphasizes openness and inclusiveness, and encourages employees to come up with different perspectives and ideas, even if those ideas may be immature or counter to mainstream views. Business leaders embrace employee suggestions with an open mind and use them as opportunities for innovation.

For example, some companies set up "idea walls", where employees can write their ideas at any time, and other employees can discuss and add. This open communication mode provides fertile soil for innovation.

· How to build a people-oriented innovation culture

1. Leaders lead by example

Enterprise leaders are the advocates and practitioners of innovation culture. They need to convey the people-oriented concept to employees through their words and actions, for example, actively participate in employees' innovation activities, pay attention to employees' career development, and provide employees with support and resources.

Leadership's openness and respect for employees can set an example for companies and lead employees to actively participate in innovation.

2. Establish effective communication mechanisms

Companies need to establish multi-level, multi-channel communication mechanisms to ensure that employees can express their ideas and needs in a timely manner. For example, set up employee suggestion boxes, hold regular employee seminars, and carry out online communication platforms.

Through these communication mechanisms, companies can keep abreast of employees' innovative ideas, but also let employees feel that their opinions are valued.

3. Provide innovation support and resources

Enterprises should provide necessary support for employees' innovative activities, including capital, technology, equipment and other resources. For example, set up an innovation laboratory to provide advanced experimental equipment and technical support for employees; Set up an innovation fund to provide financial protection for employees' innovation projects.

At the same time, enterprises can also cooperate with external institutions such as universities and scientific research institutions to provide employees with a broader platform for learning and communication.

People-oriented innovation culture is the core of enterprise culture and innovation atmosphere. It stimulates employees' innovation motivation, promotes team cooperation and collaborative innovation, and creates an open and inclusive innovation environment by respecting employees, paying attention to their needs and encouraging their participation. To build this culture, companies need leaders to lead by example, establish effective communication mechanisms, and provide innovation support and resources. Only in this way can enterprises maintain innovative vitality in the fierce market competition and achieve sustainable development.

Table 1.3 - Methods of innovation activities of enterprises

1	Literature research method	Through systematic review of domestic and foreign literature on technological innovation, risk management and technological innovation risk management, the existing theoretical achievements and practical experience are summarized. The literature research method will help clarify the definition of core concepts, analyze the shortcomings of

		existing research, and provide a theoretical basis for the construction of Nanshan Zhishang technology innovation risk management system. Literature sources include academic journals, industry reports, corporate case studies, etc.
2	. Case analysis	Taking Nanshan Zhishang as the research object, this paper deeply analyzes its risk management practice in technological innovation activities. Through the collection of enterprises' public data, annual reports, news reports and industry analysis reports, the types of risks faced in the process of technological innovation, risk management measures and their effects are analyzed. Case analysis helps to combine theory with practice and find the problems and needs in the actual operation of enterprises.
3	Field research method	Through field visits to Nanshan Zhishang Enterprise, interviews with enterprise management, technology research and development personnel and risk management department, to obtain first-hand information. To understand the cognition, existing process, existing problems and improvement suggestions of risk management in the process of technological innovation. Field investigation method can make up for the deficiency of literature research and case analysis, and enhance the pertinence and practicability of research.
4	Questionnaire survey method	A questionnaire was designed for employees of Nanshan Zhishang Enterprise to investigate their cognition and attitude towards technological innovation risks, as well as the implementation and satisfaction of existing risk management measures. Questionnaire survey can widely collect opinions and suggestions from employees and provide data support for the optimization of risk management system.
5	Risk assessment model analysis	Based on the results of literature research and field investigation, the risk of Nanshan Zhishang technology innovation is evaluated by quantitative analysis method. Risk matrix, analytic hierarchy process (AHP) or fuzzy comprehensive evaluation can be used to quantify the risk factors and determine the priority of the main risk factors. This method is helpful to identify and evaluate risks scientifically and provide basis for formulating risk management strategies.
	Comparative research method	This paper compares and analyzes the technology innovation risk management practice of Nanshan Zhishang with other enterprises in the same industry or advanced enterprises, and finds out its advantages and disadvantages in risk management. Through comparative study, the successful experience of other enterprises is used for reference to optimize the risk management system of Nanshan Zhishang.
	Expert consultation	Invite experts, scholars and industry veterans in the field of risk management to review and consult on the risk management system framework and strategy formed during the research process. The expert consultation method can ensure the scientific and practical results of the research and avoid the deviation caused by the subjective factors of the researcher.

Source: created by the author according to [1, 4 -7]

In this study, the above research methods will be comprehensively applied to form a systematic research method system. Literature research method and case analysis method are used to construct the theoretical basis and analyze the current situation. Field survey and questionnaire survey are used to obtain first-hand information and employee feedback; The risk assessment model analysis method is used to evaluate the risk quantitatively. Comparative research method is used to learn from advanced experience; Expert consultation is used to validate and optimize research results. Through the organic combination of various methods, to ensure the comprehensiveness and scientific research.

SECTION 2

ANALYSIS OF THE CURRENT SITUATION OF YANTAI NANSHAN ZHISHANG TECHNOLOGY CO., LTD

2.1 General characteristics of the organization of Yantai Nanshan Zhishang Technology Co., Ltd

Yantai Nanshan Zhishang Technology Co., Ltd. (hereinafter referred to as "Nanshan Zhishang") was established in 2007, formerly known as Shandong Nanshan Textile and Clothing Co., LTD. In 2017, the company officially changed its name to Shandong Nanshan Zhishang Technology Co., Ltd. In 2020, Nanshan Zhishang was successfully listed on the Growth Enterprise Market of Shenzhen Stock Exchange (stock code: 300918), marking its official entry into the capital market and opening a new stage of development. In recent years, through continuous technological innovation and industrial chain extension, the company has gradually developed into one of the leading enterprises in the domestic wool worsted industry.

The main business of Nanshan Zhishang covers three sectors:

Worsted worsted: The company is one of the leading enterprises in the field of worsted worsted in China. Its products include worsted fabrics, functional fabrics, etc., which are widely used in high-end suits, uniforms and other fields. Its combed fabric has won the title of national manufacturing single champion demonstration enterprise.

Garment manufacturing: Based on high-quality worsted fabrics, the company carries out garment manufacturing business, including self-branded garments and ODM/OEM business. Its clothing products cover suits, shirts, casual wear and other categories, mainly for the middle and high-end market.

Research and development and production of new materials: In recent years, Nanshan Zhishang has actively laid out the field of new materials, focusing on the development of ultra-high molecular weight polyethylene fiber (UHMWPE fiber)

and high-performance nylon filament. Among them, UHMWPE fiber has the characteristics of high strength, low density and corrosion resistance, and is widely used in aerospace, automotive, protective equipment and other fields.

Nanshan Zhishang has a complete industrial chain from wool procurement, spinning, weaving to garment production, realizing the integrated layout of wool spinning and clothing. In addition, the company also extends the industry chain, lays out the field of new materials, and creates a double-chain coordinated development system of "wool textile and garment industry chain" and "new material industry chain". The specific layout is as follows: upstream: the company has wool procurement channels and ensures the supply of raw materials through self-construction or cooperation; midstream: covering spinning, weaving, dyeing and finishing, the company improves production efficiency and product quality through intelligent production equipment and technology upgrades; downstream includes apparel manufacturing and brand operations, where the company brings products to market through its own brand and ODM/OEM business.

New material field: The company plans to build UHMWPE new material projects and high-performance nylon filament projects to further expand business boundaries.

Industry position. Global scale and market influence. China is the world's largest wool spinning producer, wool worsted yarn industry has a significant scale advantage. Jiangsu, Zhejiang, Guangdong, Shandong and Shanghai have formed a relatively complete woolen spinning industry cluster, and these areas occupy an important position in the production and export of woolen worsted yarns.

High-end market voice. European wool textile enterprises with years of history and advanced spinning technology, equipment level and design concept, occupy a dominant position in the high-end market. However, China's wool worsted industry has also gradually promoted the value chain in recent years, and some leading enterprises have begun to transform to high-end through technological innovation and brand building.

Increased industry concentration. In recent years, the concentration of the wool textile industry has been increasing, and small and medium-sized enterprises have gradually cleared due to the decline in profit margins, and their market share has concentrated on the head enterprises. For example, Nanshan Zhishang is one of the leading enterprises in the domestic worsted wool industry, and its worsted wool production capacity ranks top in the country.

Table 2.1-Nanshan Zhishang main products in the first half of 2024 production and sales and other business indicators compared with the same period of last year

product type	project	ten thousand yuan, RMB		
		1 – 6,2024	1 – 6,2023	Changes
Spinning wool	Production (10,000 meters)	613.62	705.40	-13.01%
	External sales volume (10,000 m)	415.60	570.30	-27.13%
	Clothing business consumption (10,000 m)	103.82	135.35	-23.30%
suit	Self-produced output (ten thousand sets)	43.42	57.79	-24.87%
	Sales (10,000 sets)	53.34	67.90	-21.44%
shirt	Self-produced output (ten thousand pieces)	22.21	23.54	-5.63%
	Sales (10,000 pieces)	33.93	54.61	-37.86%

Source: Nanshan Zhishang prospectus, summary tabulation: China's first textile network

Competitive advantage. Technological innovation and process upgrading

Some wool worsted enterprises have improved product quality and production efficiency by introducing advanced spinning processes (such as compact spinning, Siro spinning, etc.) and high-end imported equipment. For example, NSA

is the world leader in the sales volume of worsted knitting yarn segments and has significantly improved the fineness, evenness and strength of yarns by optimizing processes and equipment.

Digital transformation and intelligent production.Digital transformation is an important development direction of worsted industry. Some enterprises have achieved the improvement of production efficiency and the reduction of costs through intelligent production equipment and management systems. For example, through "intelligent technology, intelligent manufacturing, intelligent warehousing, intelligent logistics" and other digital means, the number of employees per 10,000 square meters has been significantly reduced, while improving the per capita income of production personnel and the rate of finished products.

Table 2.1- Nanshan Zhishang clothing intelligent manufacturing upgrade project investment composition

Unit: ten thousand yuan, RMB			
Source: Nanshan Zhishang prospectus, summary tabulation: China's first textile network			
order number	project	amount of money	amount of money
1	Construction investment	8，481.97	100.00
1.1	Project construction costs	7，868.45	92.77
1.1.1	Construction project fee	430.00	5.07
1.1.2	original equipment cost	7，168.84	84.52
1.1.3	Installation cost	269.61	3.18
1.2	Other project construction costs	209.61	2.47
1.3	budget allowance	403.93	4.76
2	floating capital	-	-
3	total investment	8，481.97	100.00

• Brand and market development

Brand building is the key for wool worsted enterprises to enhance their competitiveness. Some enterprises have enhanced their brand influence and market share by cooperating with high-end brands and expanding international markets. For example, China's wool worsted enterprises take advantage of the "Belt and Road" Initiative and other policy advantages to accelerate the international market layout.

• Personalized customization and sustainability

With the increase of consumers' demand for personalized and environmental protection, wool worsted enterprises meet market demand through technological innovation and sustainable development strategies. For example, the development of fabrics with environmentally friendly properties and special functions (such as wrinkle resistance, anti-bacterial), as well as the use of big data and smart devices to provide personalized customized services.

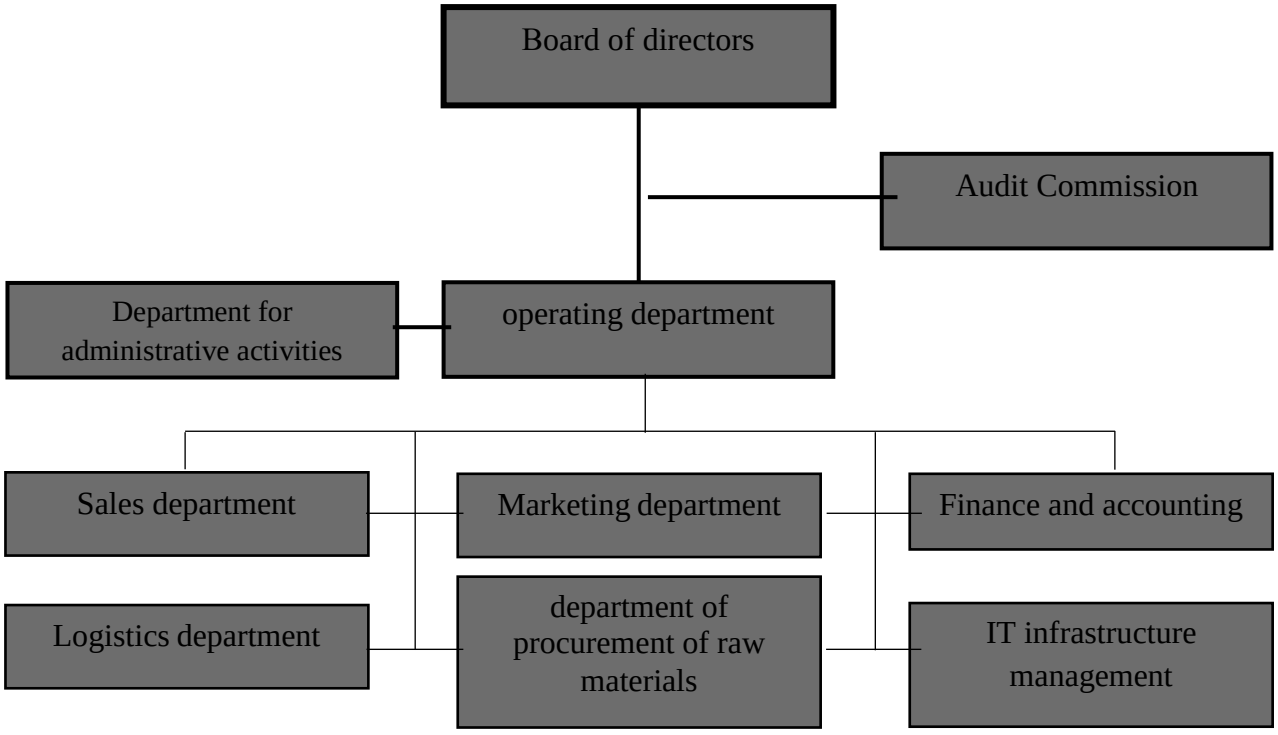

Figure 2.1 - Organizational structure of Draw the organizational structure of the company and describe which department does what.

Source: compiled by the author based on reports of "Jiahao Grain and Oil Company"

industry title	key responsibilities
General manager's office	Formulate the company strategy, coordinate the work of all departments, and

	represent the company externally
financial department	Responsible for financial planning, budget preparation, fund management, financial statement production, etc
Human resource department	Responsible for recruitment, training, performance appraisal, employee relationship management, etc
Market department	Responsible for market research, brand promotion, advertising, customer relationship maintenance, etc
sales department	Responsible for product sales, customer development, sales channel management, sales performance tracking, etc
Research and development department	Responsible for new product research and development, technology improvement, project management, intellectual property application, etc
PD(product department)	Responsible for production plan formulation, production process management, quality control, equipment maintenance, etc
purchase department	Responsible for raw material procurement, supplier management, procurement cost control, etc
Customer Service Department	The Customer service department is responsible for customer consultation, after-sales service, customer complaint handling, etc

2.2 Analysis and factors influencing the innovative activity of a textile company Please present the measures you propose in the form of a picture or table. There cannot be only text in section.

influencing factor	**describe**	**measure**
technical competence	Internal technical level and research and development ability of the company	Increase investment in research and development, introduce high-end technical personnel, and cooperate with scientific research institutions
market demand	Market demand for and acceptance of innovative products	Conduct market research to understand consumer needs and develop new products that meet market needs
policy support	Government policy support and subsidies for the textile industry	Actively apply for government subsidies and tax incentives, and participate in government-supported innovative projects

environment of competition	The degree of competition within the industry and the innovation activities of the competitors	Analyze the innovation strategies of competitors and develop differentiated innovation strategies
supply chain management	The impact of supply chain efficiency and flexibility on innovation	Optimize the supply chain management, improve the response speed and flexibility of the supply chain
corporate culture	The importance and cultural atmosphere of innovation within the company	Establish an innovation incentive system, encourage employees to put forward innovative ideas, and create an innovative culture
financial support	Funding adequacy of the company for innovation activities	Multi-channel financing to ensure financial support for innovative projects
international co-operation	Cooperation and technical exchange with international advanced enterprises	Strengthen international cooperation and introduce foreign advanced technology and management experience
IPR (intellectual property protection)	The company's awareness and measures for intellectual property protection	We will strengthen intellectual property rights protection, apply for patents and trademarks, and prevent technology leakage
Environmental requirements	Environmental regulations and consumer demand for environmental products	Develop environmental protection products, adopt green production process, comply with environmental protection laws and regulations

As a leading domestic textile and new material enterprise, Nanshan Zhishang's innovation path is driven by many factors, as follows:

Market demand. Consumers' higher pursuit of product function and quality is the core driving force for enterprise innovation. Products such as "OPTIM Light Feather Outdoor fabric" and "Air Wool fabric" launched by Nanshan Zhishang meet the market's thirst for functional fabrics. In addition, with the rise of healthy lifestyles such as outdoor sports and yoga, Nanshan Zhishang actively layouts high-performance differential nylon filament projects to meet the market demand for high-performance fibers.

Technological progress. The application of new technologies opens the way for enterprise innovation. Nanshan Zhishang realizes the optimization of production

process by introducing intelligent equipment and information system. For example, in the development and production of ultra-high molecular weight polyethylene fiber (UHMWPE), the company uses advanced spinning solutions and stretching processes to improve the strength and quality of the fiber. In addition, Nanshan Zhishang also demonstrated its strong technical strength by applying UHMWPE fiber to the tendon rope of humanoid robot dexterous hands through technological innovation.

Policy support. Government incentive policies for innovation, such as tax incentives and research project support, provide external impetus for enterprises to innovate. Nanshan Zhishang has obtained policy support and financial guarantee through fixed increase fundraising and other ways for the construction of high-performance fiber projects.

Competitive pressure.The fierce market competition forces enterprises to innovate constantly to maintain competitive advantage. In the face of competition from domestic and foreign counterparts, Nanshan Zhishang has enhanced its market competitiveness through continuous technology research and development and product innovation. For example, the company further consolidated its leading position in high-performance fibers by optimizing production processes and improving product quality.

Talent pool. High-quality talent team is the key basis of enterprise innovation. Nanshan Zhishang attaches great importance to the introduction and training of talents, and has established a team with innovative spirit and professional skills. Through the perfect talent training mechanism and talent echelon construction, the company continues to expand the R & D team, providing solid support for the innovation and development of enterprises.

Environmental awareness. With the increasing global awareness of sustainable development and environmental protection, Nanshan Zhishang is actively engaged in green innovation. The company is committed to developing environmentally friendly fabrics, reducing energy consumption and waste emissions

in the production process, in order to achieve a win-win situation of economic benefits and environmental protection.

Consumer behavior research. Through in-depth research on consumer behavior and insight into market trends, Nanshan Zhishang designs products that better meet consumer needs. The company constantly collects and analyzes consumer feedback to ensure continuous improvement in product design and functionality.

Supply chain management. Efficient supply chain management is another key factor in Nanshan's innovation. By optimizing the supply chain, the company ensures the quality of raw materials and the stability of supply, while reducing production costs and improving market response speed.

Cross-border cooperation. Nanshan Zhishang is not limited to the traditional textile industry, but actively seeks cross-border cooperation with other industries. Through cross-border cooperation, the company is able to explore new market areas and diversify its products and services. For example, the company cooperates with international new energy giants to apply high-performance fibers to the field of robotics.

Corporate culture. Corporate culture is also an important factor in promoting innovation. Nanshan Zhishang adheres to an open and inclusive corporate culture, encourages employees to propose new ideas and creativity, and provides them with the platform and resources to realize their ideas. This cultural atmosphere stimulates the innovation enthusiasm of employees and promotes the innovation activities within the enterprise.

Internationalization strategy. Internationalization strategy is an important driving force for Nanshan Zhishang's innovation. With the in-depth development of globalization, Nanshan Zhishang actively expands the international market, cooperates with international well-known brands, introduces international advanced technology and management experience, and promotes the technological innovation and management innovation of enterprises.

Academic collaboration. On the road to innovation, Nanshan Zhisao also focuses on cooperation with academia. Through close cooperation with universities and research institutions, the company is able to timely understand and absorb the latest scientific research results, transform theory into practical application, and further accelerate the pace of product innovation.

The innovation road of Nanshan Zhishang is the result of many factors. The company will continue to adhere to the innovation-driven development strategy, and continue to explore and practice in order to achieve the long-term development of the enterprise and the continuous progress of the industry.

System integration and network innovation model. Theoretical basis: The model emphasizes collaborative innovation between various departments within the enterprise and between the enterprise and external partners. By integrating internal and external resources, an organic innovation network can be formed, which can realize resource sharing and complementary advantages, so as to enhance the overall innovation ability. Application of Nanshan Zhishang: Through the industrial chain collaborative innovation model, Nanshan Zhishang forms a linkage development system with upstream and downstream enterprises. This model not only optimizes the allocation of resources, but also accelerates the transformation and application of innovation achievements, and enhances the competitiveness of the entire industrial chain.

Stage - Level model. Rationale: The model divides the innovation process into multiple stages, each with a rigorous evaluation and screening mechanism. This method can effectively manage the risk of innovative projects and ensure the reasonable allocation of resources. Application of Nanshan Zhishang: In the process of product development, Nanshan Zhishang adopts the stage-level model to ensure the market competitiveness of products through multi-stage testing and optimization. For example, in the development of new products, through multiple stages such as market research, technology development, laboratory testing, and market verification, each stage is rigorously evaluated to avoid the advancement of bad projects.

Open innovation model. Theoretical basis: This model advocates that enterprises go beyond their own boundaries and actively absorb external ideas and resources. By working with external partners, companies can access more opportunities for innovation. Application of Nanshan Zhishang: Through cooperation with scientific research institutions, universities and other enterprises in the industry, Nanshan Zhishang introduces external innovative thinking and accelerates the process of product innovation. For example, cooperation with universities to carry out industry-university-research projects, with the help of scientific research strength of universities to overcome technical problems.

User-driven innovation model. Theoretical basis: This model believes that users are an important source of innovation, and enterprises should pay close attention to user needs and feedback, and carry out product design and optimization with users as the center. Application of Nanshan Zhishang: Nanshan Zhishang has established a perfect user feedback mechanism, and constantly adjusts and improves product design to meet market demand through user participation and experience. For example, through online platforms and offline research to collect user opinions, timely adjustment of product functions and design.

Cross-border integration innovation model. Theoretical basis: The model emphasizes that enterprises integrate technologies and thinking modes from different fields through cross-industry cooperation to generate new innovation points.

Application of Nanshan Zhishang: Nanshan Zhishang actively seeks cooperation opportunities with different industries, and develops new products with unique competitive advantages through cross-border integration. For example, in cooperation with science and technology enterprises, new material technologies are introduced into the traditional textile industry to develop high-performance fabrics.

Continuous iterative innovation model. Rationale: The model emphasizes that a product or service needs to be continuously updated iteratively to adapt to a rapidly changing market environment. Application of Nanshan Zhishang: Nanshan Zhishang has established a rapid response mechanism to ensure that it can timely capture market dynamics and carry out continuous optimization and iteration of

products. For example, quickly adjust product formulation or design according to changes in market demand to maintain its leading position in the market.

2.4. Driving and influencing factors of enterprise innovation represent the factors in the form of a picture

classification	factor	explain
Driving factors	1.market demand	Changing customer needs drive enterprise innovation to meet the market
	2.technical progress	The emergence and application of new technologies promote enterprises to innovate
	3.pressure of competition	Market competition forces enterprises to remain competitive through innovation
	4.policy support	Government policies, subsidies or tax incentives to encourage enterprises to innovate
	5.corporate culture	An innovative, open and inclusive corporate culture promotes innovation
	6.leadership	The vision and decision-making ability of business leaders drive innovation
	7.funding	Adequate research and development funds to support innovation activities
	8.talent pool	A high-quality R & D team and talent reserve are the foundation of innovation
influencing factor	1.organization structure	Flexible organizational structures contribute to innovation, rigid structures may hinder innovation
	2.the distribution (allocation) of resources	The rational allocation of resources affects the innovation efficiency
	3.exotic environment	Changes in the economic, political and social external environment affect the direction of innovation
	4.Internal communication	Efficient internal communication and collaboration facilitate the generation and implementation of innovative ideas
	5.risk management	The risk management ability in the process of innovation affects whether the enterprise dare to try new fields
	6.Innovation process	Improving the innovation process contributes to the

		implementation of the innovation results
	7.cooperative partner	Cooperate with universities, scientific research institutions and suppliers to promote innovation
	8.customer feedback	Customer feedback helps enterprises to adjust the direction of innovation to meet the market demand

The driving force of enterprise innovation mainly comes from two dimensions: internal and external. Internal factors include the company's strategic positioning for innovation, research and development investment, team capabilities and corporate culture. Nanshan Zhishang has provided a strong internal driving force for its innovation activities by clarifying its innovation strategy, continuously increasing R&D investment, building a high-quality R&D team, and shaping a corporate culture that encourages innovation. External factors include market demand, technological progress, policy support and industry competition. With the increasing demand of consumers for high-quality and personalized products, Nanshan Zhishang keeps up with market trends and meets consumer needs through innovation. At the same time, the support of national policies and the fierce competition in the industry also encourage enterprises to innovate constantly to maintain a competitive edge. The factors affecting enterprise innovation are also complex and diverse, such as resource constraints, market acceptance, laws and regulations. In the process of innovation, Nanshan Zhishang pays attention to the effective allocation of resources, actively seeks market recognition, and strictly abides by relevant laws and regulations to ensure the smooth progress of innovation activities.

2.4.1 Driving factors of enterprise innovation

1. Entrepreneurship

Entrepreneurship is one of the core driving forces of enterprise innovation. The research shows that entrepreneurial ability and innovation ability of entrepreneurs significantly promote the R&D input of enterprises, while business ability may reduce the R&D input due to short-term profit-seeking behavior. The

three key dimensions of entrepreneurship - management ability, entrepreneurial ability and innovation ability - have different impacts on enterprise innovation. Among them, entrepreneurial ability and innovation ability have a more significant positive effect on innovation input.

2. Corporate strategy

Enterprise strategic decision has an important influence on innovation activities. For example, M&A activity can significantly enhance a firm's incentive to innovate, as successful innovation can make a firm an attractive target for M&A. In addition, mergers and acquisitions also provide enterprises with access to external innovation resources.

3. Management incentives

Reasonable management compensation design can effectively stimulate innovation. The research shows that the compensation scheme to encourage innovation should show tolerance for early failure and reward for long-term success, and this kind of long-term incentive contract helps to improve the level of risk taking and work enthusiasm of innovation subjects.

4. Digital environment

The development of digital technology provides new opportunities for enterprises to innovate. The digital environment can significantly promote enterprise innovation by easing financing constraints, optimizing resource allocation, and reducing information asymmetry. For example, the development of the digital economy has provided enterprises with richer financing channels and reduced the cost of innovation.

5. Policy support

Government tax incentives and financial subsidies are important external incentives for enterprises to innovate. These policies reduce the cost and risk of innovation by reducing the tax burden on enterprises and providing financial support, thus promoting the development of innovation activities.

2.4.2 Influencing factors of enterprise innovation

1. Internal factors

• Diversity of the management team: The diversity of expertise and career experience of the management team has a significant role in promoting innovation. Diverse management teams are able to combine knowledge in creative ways to come up with new innovative initiatives.

• Firm size: The impact of firm size on innovation is complex. Large companies are likely to acquire innovative resources through mergers and acquisitions, while small companies rely more on in-house R&D.

• Agency problems: Public companies may face more serious agency problems, leading managers to prefer low-risk projects and thus stifle innovation.

2. External factors

• Legal system: An inclusive legal system creates an enabling environment for innovation. For example, the bankruptcy law's "forgiveness" mechanism for innovation failure can incentivize entrepreneurs to engage in innovative activities.

Intellectual property protection: Intellectual property protection has a dual impact on innovation input. On the one hand, it can motivate enterprises to invest in research and development; On the other hand, over-protection can inhibit entrepreneurship.

• Market competition: The fierce market competition prompts enterprises to continuously invest in innovation to enhance their competitiveness. However, excessive competition may lead to the dispersion of enterprise resources, which is not conducive to innovation.

3. Market and social factors

Financial market development: Financial innovation and capital market development can amplify the impact of entrepreneurship on innovation input, but their direct impact on firm innovation input is not significant.

Social and cultural factors: A society's tolerance for innovation and tolerance for failure also influence a firm's innovation behavior.

Research prospect

Enterprise innovation is a complex and systematic problem, which is affected by many factors such as internal enterprise, market environment and policy system. Future research could further explore the following directions:

1. Interdisciplinary research: Combining economics, management, sociology and other multidisciplinary perspectives, in-depth analysis of the driving mechanism of enterprise innovation.

2. Digital transformation: Study how the digital economy can promote enterprise innovation by optimizing resource allocation and reducing information asymmetry.

3. Policy optimization: Explore how to design more effective policy tools to incentivise firms to innovate and reduce "fake" innovation.

By systematically analyzing the driving and influencing factors of enterprise innovation, it can provide theoretical support and practical guidance for enterprises to formulate innovation strategy.

2.3 Analysis and assessment of the company's innovation activities

.1.4 As a leading enterprise in the textile industry, Nanshan Zhishang has achieved rapid development and competitiveness improvement through a series of innovative practices.

In terms of technology, Nanshan Zhishang constantly introduces advanced production technology and equipment, optimizes process flow, and improves product quality and production efficiency. At the same time, the company also focuses on research and development innovation, increasing investment in research and development, and promoting product upgrades and technology iterations to meet the changing needs of the market. At the management level, Nanshan Zhishang has implemented a series of innovative management measures, including the

introduction of modern management concepts and methods, such as lean production, Six Sigma, etc., in order to improve the operational efficiency and management level of the enterprise. In addition, the company also pays attention to the cultivation and incentive of talents, through the establishment of a sound training system and incentive mechanism, to attract and retain outstanding talents in the industry, to provide human resources guarantee for the continuous innovation of the enterprise. Through these comprehensive innovative practices, Nanshan Zhishang not only sets a benchmark in the textile industry, but also provides experience for other enterprises to learn from.

1. Technological innovation practice

• Nanshan Zhishang has made remarkable achievements in material research and development, such as the development of the world's only OPTIM fabric, which has the characteristics of windproof water collection, light weight, etc., and is widely used in outdoor sports apparel.

The company also optimizes production processes and shortens lead times through intelligent production systems, such as MES systems and 3D design software.

In addition, Nanshan Zhishang has also made important breakthroughs in environmental protection and energy saving technology. They use advanced environmentally friendly dyeing technology to greatly reduce water consumption and pollutant emissions in the production process, which not only protects the environment, but also reduces production costs. At the same time, the company is also committed to the development of energy-saving textile equipment, through the optimization of equipment structure and operating parameters, effectively reduce energy consumption, improve the overall energy utilization efficiency. These technological innovation practices not only enhance the market competitiveness of Nanshan Zhishang, but also make a positive contribution to the sustainable development of the textile industry.

In terms of intelligent production, Nanshan Zhishang also actively applies big data analysis technology to carry out real-time monitoring and analysis of

production data, accurately predict market demand, achieve on-demand production and inventory optimization, and further enhance the response speed and profitability of enterprises. At the same time, they also carry out industry-university-research cooperation with well-known universities and research institutions at home and abroad to jointly overcome the technical problems of the textile industry and promote the technological upgrading and innovative development of the entire industrial chain. Nanshan Zhishang's innovation practices are not limited to technology and production, but also extend to supply chain management. Through the establishment of an efficient supply chain system, the company has established a close cooperative relationship with suppliers to ensure the quality of raw materials and the stability of supply. In addition, Nan Shan Zhishang also enhances the transparency and traceability of the supply chain through digital means, such as blockchain technology, thereby enhancing consumer trust in the product. In terms of environmental protection, Nanshan Zhishang also actively promotes green production, reduces the impact on the environment by using renewable resources and recycling waste, and achieves a win-win situation of economic benefits and environmental protection. These comprehensive innovative measures not only enhance the core competitiveness of Nanshan Zhishang, but also set a new benchmark for the sustainable development of the textile industry.

2. Management innovation practice

• Nanshan Zhishang has established a "three echelon" innovation system, including senior technicians, middle managers and new employees, to enhance the overall innovation ability through hierarchical management.

• The company implements lean production management and improves production efficiency and product quality through intelligent upgrading projects.

• Nanshan Zhishang also pays attention to staff training and career development, has established a sound training system and provides a variety of training courses to help employees constantly improve their professional skills and comprehensive quality.

• In order to stimulate the innovation potential of employees, the company has set up an innovation reward mechanism to commend and reward employees who have made outstanding contributions to technological innovation and management innovation, creating a good atmosphere for innovation.

• In terms of corporate culture construction, Nanshan Zhishang advocates the values of "people-oriented, the pursuit of excellence", and promotes the harmonious development of the enterprise by organizing a variety of cultural activities to enhance the cohesion and sense of belonging of employees.

• Nanshan is also actively introducing advanced information technologies, such as big data analytics and artificial intelligence, to optimize the decision-making process, improve management efficiency and market response speed.

The company has also established a flexible organizational structure to adapt to the rapidly changing market environment, ensuring that strategic direction and business processes can be adjusted quickly.

• In terms of supply chain management, Nanshan Zhishang has diversified raw material procurement through close cooperation with suppliers, reduced supply chain risks, and ensured the long-term stability and cost effectiveness of the supply chain through continuous supplier evaluation and optimization.

3. Business model innovation practice

• Nanshan Zhishang implements the common development of its own brand and ODM business through the business idea of "light asset and zero inventory" to meet the needs of the market with multiple varieties and less batches.

• The company also expands the market and enhances the brand influence through the e-commerce brand "Man's Brighton".

At the same time, Nanshan Zhishang actively explores the new retail model of online and offline integration, uses big data to analyze consumer behavior, accurately push personalized products and services, and enhance customer experience. In addition, the company has launched a membership system and a points reward program to further expand its market share by enhancing user engagement, promoting repeat purchases and word of mouth.

Sales of joint stores in each reporting period (the sales in the top five stores in the reporting period)

Unit: ten thousand yuan, RMB

Source: Nanshan Zhishang prospectus, summary tabulation: China's first textile network

order number	Store name	2022		2023		2024	
		sales	sales volume	sales	sales volume	sales	sales volume
1	Beijing Badaling Aolai store	191.15	0.26	384.13	0.45	464.98	0.44
2	Chengdu Wangfujing store	83.64	0.10	133.98	0.14	143.29	0.14
3	Mianyang Parkson shop	64.75	0.05	92.40	0.06	106.17	0.07
4	Panjin McKelle shop	57.71	0.08	38.25	0.04	42.32	0.04
5	Yantai Zhenhua collection store	35.95	0.05	74.77	0.09	-	-

SECTION 3

IMPROVEMENT TO INCREASE THE EFFICIENCY OF INNOVATION ACTIVITIES YANTAI NANSHAN ZHISHANG TECHNOLOGY CO., LTD.,

3.1 Justification of the need to implement a system of measures to increase the efficiency of the company's innovation activities

Please present the measures you propose in the form of a picture or table. There cannot be only text in the proposals section.

Measures category	concrete measure	Expected effect
Organizational structure optimization	1.Set up cross-departmental innovation teams	Promote cross-departmental collaboration and break down information islands
	2.Flat management, reduce the decision-making level	Speed up decision-making and improve responsiveness
Resource input	1.Increase R & D budgets	Provide more funding to support innovation projects
	2.Provide an innovation reward mechanism	Encourage employees to actively participate in innovation
Process management	1.Introducing agile development methods	Improve the project execution efficiency, rapid iteration
	2.Regular assessment of innovation project progress	Find the problems and adjust the direction in time
technical support	1.Introduce innovative management software	Improve project management and collaboration efficiency
	2.Provides innovative tools and training	Improve the innovation ability of employees
cultural construction	1.We will foster an open and inclusive culture of innovation	Encourage employees to propose new ideas to reduce their fear of failure
	2.Regular innovation and sharing meetings are held	Promote knowledge sharing and inspiration touch

Although Nanshan Zhishang has made remarkable achievements in innovation, it still faces some challenges and needs to further optimize innovation management.

1. Continue to invest resources for the upgrading of intelligent equipment and information systems.

Intelligent equipment upgrade: Develop an annual equipment update plan, prioritize the introduction of automated production lines, intelligent robots, iot sensors and other advanced equipment, and gradually realize the unmanned and intelligent production process. For example, the introduction of industrial robots in the manufacturing process to improve production accuracy and efficiency; The intelligent storage system is introduced in the storage link to realize the automatic storage and retrieval of goods.

Information system upgrade: Build an enterprise-level digital platform, integrate ERP (enterprise resource planning), MES (Manufacturing execution system), CRM (customer relationship management) and other systems, break the information islands between departments, and achieve real-time data sharing and collaborative work. At the same time, the introduction of cloud computing technology, reduce the cost of information construction, improve the flexibility and scalability of the system.

Improve production efficiency and management transparency: Through the synergy of intelligent equipment and information system, real-time monitoring of production progress, equipment status and quality data, to achieve visualization and fine management of the production process. Use data analytics tools to generate productivity reports and management dashboards to support management decisions and ensure efficient, transparent and controlled production activities.

Strengthen the data-driven decision-making mechanism

Big data analysis platform construction: Establish an enterprise-level big data platform, integrate production, sales, market, customer and other multi-dimensional data, and discover potential business rules and trends through data mining, machine learning and other technologies. For example, using data analysis to predict market

demand and optimize product inventory; Analyze customer behavior data to improve customer satisfaction and loyalty.

Optimize the production process: Based on the results of big data analysis, identify the bottleneck links and waste points in the production process, optimize the production layout and process flow through lean production methods and process reengineering, reduce production costs and improve production efficiency. For example, optimizing supply chain management through data analysis to reduce raw material inventory overhangs and logistics costs.

Optimize market strategy: Use big data to analyze market dynamics and competitor information, accurately target customer groups, and develop differentiated marketing strategies. For example, through social media data analysis, we can understand consumer needs and preferences, launch personalized products and services, and enhance market competitiveness.

Deepening industry-university-research cooperation

Expand cooperation with universities and research institutions. Cutting-edge technology research and development cooperation: Establish joint laboratories or R&D centers with universities and scientific research institutions to carry out cooperative research in frontier fields such as artificial intelligence, new energy, new materials and biotechnology. For example, cooperation with universities to carry out research on the application of artificial intelligence in intelligent manufacturing, the development of intelligent diagnostic systems and predictive maintenance technology.

Industry-university-research project cooperation: actively participate in national and local industry-university-research cooperation projects, strive for government funding support, and jointly undertake major scientific research tasks. For example, jointly declare national key research and development plan projects, carry out key technology research, and promote the application of scientific and technological achievements in enterprises.

• Talent training cooperation: Establish an "industry-university-research joint training base" with universities to carry out undergraduate and postgraduate

internship and joint training projects. Through the guidance of enterprise mentors, project practice and other ways, for enterprises to transport high-quality innovative talents, but also for college students to provide practical opportunities to promote the deep integration of production, learning and research.

cooperation between school and enterprise

Beijing Institute of Fashion Technology

Yantai Nanshan College

4.1.4 Establish a long-term and stable industry-university-research cooperation mechanism

• Cooperation mechanism building: Sign long-term cooperation agreements, clarify the rights and obligations of all parties, establish regular communication mechanisms and project evaluation mechanisms, and ensure the stability and sustainability of cooperation. For example, the industry-university-research cooperation conference is held every year to summarize the results of cooperation and plan the next direction of cooperation.

• Accelerating the transformation of scientific and technological achievements: establish a channel for rapid transformation of scientific and technological achievements, improve the mechanism of intellectual property protection and benefit distribution, and encourage researchers to transform and industrialize research results in enterprises. For example, a special fund for the transformation of scientific and technological achievements has been set up to support the pilot test and industrialization of scientific research achievements.

• Cooperation platform construction: Build an industry-university-research cooperation platform, integrate resources of all parties, and promote information sharing and collaborative innovation. For example, an online platform for industry-university-research cooperation will be established to release information on

technical needs, scientific research results and cooperation projects, and promote the docking and cooperation of all parties.

4.1.5 Improve innovation incentive mechanism

1. Establish a diversified incentive system

• Equity incentive: For core technical personnel and employees in key positions, the implementation of equity incentive plan, through the grant of equity or options, the interests of employees and corporate interests closely bound, stimulate the long-term innovation power of employees. For example, an employee equity incentive pool is set up to allocate equity regularly according to the innovative contribution and performance of employees.

• Performance reward: Improve the performance appraisal system, incorporate innovative achievements into performance appraisal indicators, and give corresponding performance rewards to employees according to their contributions in technology research and development, product innovation, management innovation, etc. For example, a special incentive fund for innovation has been set up to give high rewards to teams and individuals who have made major innovation achievements.

• Non-material incentive: In addition to material incentive, focus on the application of non-material incentive means, such as awarding honorary titles, promotion opportunities, training opportunities, etc., to meet employees' sense of accomplishment and career development needs. For example, the "Annual Innovation Star" selection event was set up to commend and publicize outstanding innovative talents.

2. Strengthen the training and introduction of innovative talents

• Improvement of internal training system: Establish a systematic internal training plan, and carry out training courses in innovative thinking, technology research and development, project management and other aspects for employees at different levels and positions. For example, we regularly invite industry experts to hold innovation lectures and technical training to enhance the innovation ability and technical level of employees.

• Expansion of external recruitment channels: Strengthen cooperation with universities, scientific research institutions and industry associations to expand recruitment channels for innovative talents. Attract high-end innovative talents to join the enterprise through campus recruitment, talent recruitment fair, headhunting company and other means. For example, to establish a talent recruitment cooperation mechanism with colleges and universities, recruit outstanding graduates regularly every year, and enrich the innovative talent team of enterprises.

• Talent introduction policy support: Formulate preferential talent introduction policies, provide a good working environment and development space, and attract overseas high-end talents and domestic leading talents. For example, for the introduction of high-end talents to provide housing subsidies, research start-up funds, children's education and other preferential policies to solve the worries of talents.

4.1.6 Enhance the ability of collaborative innovation in the industrial chain

1. Strengthen cooperation with upstream and downstream enterprises

• Construction of industrial chain innovation alliance: Lead or actively participate in the construction of industrial chain innovation alliance, work with upstream and downstream enterprises to formulate alliance charter and development plan, and clarify the roles and responsibilities of each party in the industrial chain. For example, the joint industry chain upstream and downstream enterprises to establish industry associations or industrial alliances to jointly carry out technology research and development and market expansion activities.

Collaborative innovation project implementation: focusing on the key links of the industrial chain and common technologies, the upstream and downstream enterprises jointly carry out collaborative innovation projects. For example, cooperate with upstream raw material suppliers to develop high-performance materials, cooperate with downstream customers to develop product applications, and enhance the overall innovation ability and competitiveness of the industrial chain.

• Information sharing and collaboration: Establish an industry chain information sharing platform to share market demand, technology trends, production plans and other information in real time, and promote collaboration between upstream and downstream enterprises in the industry chain. For example, through the information platform to achieve rapid response to orders and supply chain optimization management, reduce inventory costs, improve customer satisfaction.

Share technology platforms and resources

• Technology platform sharing: Build enterprise-level public technology platforms, such as R&D laboratories, testing centers, pilot bases, etc., and open them to upstream and downstream enterprises in the industrial chain. For example, sharing research and development equipment and testing instruments with upstream and downstream enterprises reduces the cost of research and development of enterprises and improves the overall technical level of the industrial chain.

• Resource sharing and collaboration: integrate the resources of upstream and downstream enterprises in the industrial chain, such as capital, technology, talent, market channels, etc., and realize complementary advantages through resource sharing and collaborative cooperation. For example, jointly with upstream and downstream enterprises to carry out market promotion activities, share sales channels and customer resources, and enhance the market competitiveness of the industrial chain.

• Industrial ecological construction: Build an industrial ecosystem based on collaborative innovation of the industrial chain, promote cooperation and competition between upstream and downstream enterprises of the industrial chain, and form a good industrial ecological environment. For example, through the holding of industrial forums, technical exchanges and other activities, strengthen the communication and cooperation between the upstream and downstream enterprises of the industrial chain, and promote the sustainable development of the industry.

3.2 **The management practice of internal innovation activities in Yantai Nanshan Zhishang Enterprise**

Please present the measures you propose in the form of a picture or table. There cannot be only text in the proposals section.

Measures category	concrete measure	mode of execution	Expected effect
We will innovate cultural development	1.Set up an incentive mechanism for innovation	Give material and spiritual rewards to innovative employees	Stimulate the enthusiasm of employees for innovation
	2.Regular innovation and sharing meetings are held	Organize innovation case sharing every month	Promote knowledge sharing
Optimization of innovation process	1.Establish an innovative proposal management system	Develop an online platform, and employees will submit proposals and review them	Improve the efficiency of proposal handling
	2.Set up an incubation mechanism for innovation projects	Provide financial, technical, and resource support	We will accelerate the commercialization of innovation achievements
Talent training and incentive	1. Carry out innovative skills training	Provide financial, technical, and resource support	Improve the innovation ability of employees
	2.Set up an innovation mentor system	Experienced staff to guide new employees	Promote experience inheritance

Innovation strategy and objectives.

1. The management mode of "six modernizations" driven by data intelligence and quality. Nanshan Zhishang empowers enterprise operation through digital intelligence technology, and builds a management model of "six modernization" operation, namely, accurate marketing, collaborative design, agile supply, flexible manufacturing, lifelong service and scientific decision-making. This model realizes the informatization and intelligence of enterprise operation and promotes the transformation and upgrading of products and business model through the three-level structure of data intelligence base layer, data intelligence operation layer and data intelligence decision layer.

2. Collaborative innovation strategy with industrial chain innovation as the core. Nanshan Zhishang has created a "whole industry chain synergy" development system, with a complete wool textile and apparel industry chain from wool to clothing, and on this basis formed a "double chain synergy" strategy, that is, the deep integration of textile and apparel industry chain and new material industry chain. Through the linkage development with upstream and downstream enterprises, the company has realized the industrial chain innovation model and improved the efficiency of technological product promotion.

1. Intelligence and digital transformation. Through the introduction of ERP, CRM, MES and other systems, Nanshan Zhishang has realized the digital management of the whole production process. The company has also created a green intelligent production workshop through intelligent equipment upgrades, such as intelligent warehousing, automatic cutting, unmanned dyeing lines, etc. These initiatives not only improve production efficiency, but also reduce operating costs.

2. Innovation platform and talent training. Nanshan Zhishang has established innovation platforms such as national recognized enterprise technology center and post-doctoral research workstation. At the same time, through the "three echelon" innovation system, the company gives full play to the innovation advantages of talents at different levels, and forms an innovation team with a clear level and a clear division of labor.

3. Product innovation and market expansion. Through industrial chain innovation, Nanshan Zhishang has developed a variety of innovative featured products, such as antibacterial and antiviral wool fabrics, wool shirts, elastic anti-wrinkle travel suits, etc. In addition, the company has improved research and development efficiency and shortened product development cycles through 3D design software.

4. Future development direction. Nanshan Zhishang will continue to deepen the "double chain synergy" strategy and promote the integrated development of the textile and apparel industry chain and the new material industry chain. At the same time, the company will further enhance the level of intelligence and create a green

and sustainable industrial chain. Through these innovative practices, Nanshan Zhishang not only enhances the core competitiveness of the enterprise, but also provides a useful reference for the transformation and upgrading of the textile industry.

5.3 Innovative organization and talent management: the practice of Yantai Nanshan Zhishang. Yantai Nanshan Zhishang has formed a unique "three-echelon" innovation system and industry-university-research cooperation model in terms of innovation organization and talent management, providing a solid talent guarantee and organizational support for the innovative development of enterprises.

1. "Three echelon" innovation system. Nanshan Zhishang has built a "three echelon" innovation system covering senior technicians, middle managers and new factory employees: The first echelon is composed of engineers, designers and other senior technical personnel with rich practical experience and theoretical knowledge, mainly responsible for the company's important product development, scientific and technological innovation, as well as the installation, operation, training and reabsorption of new equipment or technology. The second echelon: consists of middle-level managers from various workshops and departments, who are mainly responsible for implementing various production and technical reform measures formulated by the company, ensuring safe and efficient production, and providing hardware support for scientific and technological innovation. The third echelon: consists of newly entered college and secondary school graduates, mainly in the production and scientific research line training and learning, through the combination of theory and practice, to improve the ability to solve practical problems. This hierarchical and collaborative innovation system not only enhances the innovation ability of enterprises, but also promotes the rapid growth of talents at all levels.

2. Industry-university-research cooperation and personnel training mode.

Nanshan Zhishang attaches great importance to industry-university-research cooperation, and promotes technological innovation and personnel training through deep collaboration with universities and research institutions. • Cooperation platform

construction: The company jointly holds training and research classes with Xi 'an Polytechnic University, Beijing Institute of Fashion Technology, Donghua University and other universities, and realizes the combination of teaching, production and research with Yantai Nanshan University, organizes new teaching materials, and innovates teaching and training methods.

Talent training and practice: Through the "scientist + engineer" double tutor model, Nanshan Zhishang provides students with an engineering innovation environment, and strengthens the basic research and practical ability training of application traction. In addition, the company has also established platforms such as graduate training bases to promote the deep integration of production, university and research.

Employee innovation incentive: The company provides an innovation platform for employees, develops a set of people-oriented scientific and technological innovation system, ensures that the training rate of backbone technical personnel and team employees reaches 100%, and provides employees with promotion opportunities.

Innovate the effectiveness of organization and talent management. Through the "three echelon" innovation system and industry-university-research cooperation model, Nanshan Zhishang has achieved remarkable results in many aspects.

- Improvement of innovation ability: All echelons of talents cooperate and learn from each other in the process of innovation, and the innovation ability and innovation consciousness of enterprises have been significantly improved.

- Industrial chain collaborative innovation: The company has formed a linkage development system with upstream and downstream industrial chain enterprises, promoting the rapid transformation and application of new fibers, auxiliaries and other technologies.

-Talent cultivation and retention: Through industry-university-research cooperation, Nanshan Zhishang not only cultivates a large number of high-quality innovative talents, but also provides employees with a broad space for career development and enhances the sense of belonging of talents.

This innovative organization and talent management model provides a strong driving force for the high-quality development of Nanshan Zhishang, and also provides a useful reference for other enterprises.

Innovation process and project management. The whole process innovation system from R&D to industrialization.

1. Creative generation and screening. Generate lots of ideas through brainstorming, Delphi, etc.The ideas are screened and evaluated, and the ideas that match the enterprise strategy, have great market potential and high technical feasibility are selected.

2. Concept development and testing. The selected ideas are transformed into concrete concepts and preliminary designs are made. Conduct small-scale trials or prototype tests to verify the feasibility and effectiveness of the concept.

3. Product or service development. Carry out detailed design, including functional design, structural design, etc. Adopting agile development methods to improve development efficiency and adaptability.

4. Marketing and commercialization. Develop marketing strategies to ensure that innovative products or services are successfully brought to market. Establish customer feedback mechanism to continuously improve products or services.

5. Continuous improvement. Constantly optimize products or services based on market feedback and customer feedback. Periodically assess the progress and results of innovative projects and draw lessons learned.

Project initiation, implementation and evaluation mechanism.

1. Project initiation mechanism. Project selection and evaluation: Select the best project from multiple alternative projects based on strategic matching, financial evaluation, multi-criteria decision-making and other methods. Project approval process: including project application, demonstration, review and approval. Resource allocation and budget: Evaluate the required resources of the project, and rationally allocate human resources, material resources and funds.

2. Project implementation mechanism. Develop a project plan: Define project objectives, scope, timeline, and resource allocation. Cross-functional collaboration:

Build cross-functional teams to integrate expertise in different areas. Risk management: Identify project risks, develop response strategies, and monitor risks during implementation. Application of Agile methods: Adopting agile methodologies to improve project flexibility and responsiveness.

3. Project evaluation mechanism. Evaluate project progress regularly: identify problems and adjust plans in time through data analysis, user feedback, etc. Financial and benefit evaluation: Evaluate the economic benefits of the project, such as net present value (NPV), internal rate of return (IRR), etc. Project closure and summary: Summarize and evaluate the project, complete project delivery and knowledge transfer.

Innovation incentive and resource allocation. I. Internal incentive mechanism and innovation incentive policy

1. Establish a working mechanism to encourage innovation. Enterprises should set up full-time departments and personnel, responsible for the evaluation and assessment of innovation work, formulate incentive innovation system, and carry out innovation work training. Establish regular post rotation system to enhance employees' sense of novelty and innovation initiative. We should do a good job in protecting the innovation achievements and prevent the interests of the parties to the innovation achievements from being damaged.

2. Establish a scientific and effective innovation evaluation system. Enterprises need to establish a set of evaluation and evaluation system to measure innovation achievements, reflecting fairness and objectivity, so as to facilitate the realization of rewards and punishments. It can introduce advanced innovation evaluation models at home and abroad, and modify and improve them appropriately according to its own reality.

3. Improve incentives for innovation. Material incentive: through salary, bonus, bonus, welfare and personnel treatment, the value of employees' innovation achievements can be reasonably matched with their income, and the enthusiasm for innovation can be stimulated. Spiritual motivation: Formulate measurement standards, grant titles and enjoy rights to employees who meet the standards, such as

bonus points for selecting the best in the evaluation, and incorporate job promotion into the assessment of innovation ability. Cultural construction: Incorporate innovation into corporate culture construction, create a glorious and respected cultural atmosphere for innovation, and enhance employees' sense of belonging.

Second, the application of digital technology in resource allocation.

1. Promote innovation management. Digital transformation provides enterprises with new management tools and methods, integrates and analyzes big data, provides data support for decision making, reveals market trends, consumer behavior and potential growth opportunities, and provides direction for innovation. The use of technologies such as cloud computing, collaboration tools, and social media breaks geographical constraints and accelerates the innovation process.

2. Optimize resource allocation. Through automated and intelligent production processes, production costs and time are reduced, freeing up more resources for research and development and innovation activities. Digital tools optimize supply chain management, reduce inventory costs, and improve the ability to respond to market changes. Establish online sales channels and customer service platforms, accelerate product market penetration, better position target customer groups, and develop more effective marketing strategies.

3. Promote optimal allocation of resources. The digital transformation has a significant positive impact on the optimal allocation of resources, but attention should be paid to its possible monopoly effect to ensure that the positive effect of competition enhancement exceeds the negative effect of monopoly effect.

3.3 Модель підвищення ефективності інноваційної діяльності Yantai Nanshan Zhishang Technology Co., Ltd.,

Please present the measures you propose in the form of a picture or table. There cannot be only text in the proposals section.

	measure	describe
1	Establish an incentive mechanism for innovation	Create innovation incentives to encourage employees to propose new ideas and solutions

2	Introduce a cross-departmental collaboration model	Organize cross-departmental teams to promote knowledge exchange and cooperation in different fields
3	Provide innovation training and resource support	Regular innovation training, provide technical tools and research resources
4	Establish a creative management platform	Collect, screen, and manage employee ideas through a digital platform
5	Strengthen cooperation with universities and scientific research institutions	Work with external institutions to capture cutting-edge technologies and innovative ideas
6	Carry out innovation competition	Organize the internal innovation competition to stimulate the staff's creativity and enthusiasm for participation
7	Optimize the project management process	Simplify the process, reduce the administrative burden, and improve the execution efficiency of innovative projects
8	Create an open corporate culture	Encourage employees to express their views freely and establish an open and inclusive atmosphere for innovation

1. Patent application and academic paper publication Nanshan Zhishang attaches great importance to intellectual property protection and technological innovation. As of 2023, the company has formed 87 patents, including 25 invention patents, 35 utility model patents and 28 design patents. The company actively participates in academic research, and its scientific research team has made breakthroughs in the field of new materials such as ultra-high molecular weight polyethylene fiber, and has published a number of high-quality academic papers.

2. New product development and market competitiveness improvement. Through continuous technological innovation and product research and development, Nanshan Zhishang has successfully developed a variety of innovative products, such as OPTIM outdoor fabric, air wool fabric, antibacterial and antiviral wool fabric, wool paper yarn interwoven jacket. These products not only meet the

market demand, but also enhance the company's brand image. The company won the title of "Continuous Innovation Unit" in 2024, and its primary color outdoor protective tweed fabric won the first prize in the 7th China Ecological and Environmental Protection Fabric Design Competition. Through intelligent transformation and digital transformation, Nanshan Zhishang has achieved the improvement of production efficiency and the reduction of costs. The company also through collaborative innovation in the industrial chain, the new fibers and additives in the upstream are quickly converted into products and pushed to the high-end market. The company has established long-term cooperative relations with a number of well-known brands at home and abroad, such as Heilan Home, Announced Bird, Armani, etc., to further enhance its competitiveness in the market.

Picture 3.3 - Brand leading

Although Nanshan Zhishang has achieved remarkable results in innovation, there may still be some challenges in the innovation management process:

1. Systematic deficiencies in innovation management: Although the company has achieved fruitful results in technology research and development and product innovation, there is still room for improvement in the systematic aspects of innovation management, such as how to better integrate innovation results with market demand, and how to further optimize the innovation process.

2. Shortage of high-end talents: Although Nanshan Zhishang cultivates talents through cooperation with universities, it may still face the problem of shortage of high-end talents in high-end technology research and development and innovation management.

3. International market competition pressure: Under the background of globalization, Nanshan Zhishang's brand influence in the international market still

needs to be improved, and it needs to further strengthen brand building and international market expansion.

In the innovation management process, balancing R&D with market needs is a complex but crucial task. Here are some effective methods and strategies.

1. In-depth insight into market needs. · Market research and analysis: In-depth understanding of target users' needs, pain points and expectations through market research, user interviews, questionnaires, focus group discussions, etc. Competitive product analysis: Study competitors' products and market strategies, understand market trends and user feedback, avoid repetitive development, and find differentiated competitive advantages.

2. Establish continuous market feedback mechanism. User feedback channels: Collect user opinions through social media, customer service, product evaluation and other channels, and timely adjust product features.· Regular feedback loop: Establish close communication channels with users to ensure that the R&D team can quickly adjust the development direction according to market feedback.

3. Cross-departmental collaboration and communication. Cross-functional team: Establish a cross-functional team including representatives from marketing, R&D, sales, production and other departments to ensure that the whole process from product concept to launch can fully consider market demand.· Information sharing platform: Use project management systems or product lifecycle management (PLM) systems to facilitate cross-departmental communication and collaboration and ensure information transparency.

4. Flexible R&D process. Agile development: Adopt agile development and other flexible R&D processes, quickly respond to market changes and technical challenges, and constantly optimize products through small steps.· Iterative innovation: Periodically launch iterative product versions, optimize according to market feedback and technological progress, and reduce risks.

5. Technical pre-research and forward-looking layout.· Technical pre-research: Set up a special technical pre-research team to track the trend of cutting-edge technology and ensure that the technical research direction is consistent with

the market demand. Combination of innovation and practicality: In the process of research and development, it is necessary to pay attention to the advanced nature of technology, but also to ensure the ease of use and practicality of products.

6. Accurate market demand management. Demand prioritization: Market demands are prioritized through demand analysis tools to ensure that key needs are met first. Market segmentation and precise positioning: Develop more targeted products according to the needs and preferences of different customer groups.

7. Matching of business model and innovation. Business model innovation: Explore new revenue models, pricing strategies and market penetration methods to ensure that innovations can be monetized through appropriate business models.Cost-benefit assessment: In the process of research and development, comprehensive assessment of research and development costs, production costs and sales costs to ensure that the product is profitable and sustainable.

8. Cultivate innovative culture and market-oriented thinking. Innovation culture: Encourage employees to innovate, set up innovation funds and reward mechanisms, and stimulate employees' creativity. Market-oriented thinking: Develop market-oriented thinking in employees so that they can better understand market needs and trends to support innovation.

In the innovation management process, balancing R&D with market needs is a complex but crucial task. Here are some effective methods and strategies. In-depth insight into market needs. · Market research and analysis: In-depth understanding of target users' needs, pain points and expectations through market research, user interviews, questionnaires, focus group discussions, etc. Competitive product analysis: Study competitors' products and market strategies, understand market trends and user feedback, avoid repetitive development, and find differentiated competitive advantages.

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Cross-departmental collaboration and communication. Cross-functional team: Establish a cross-functional team including representatives from marketing, R&D, sales, production and other departments to ensure that the whole process from product concept to launch can fully consider market demand. Information sharing platform: Use project management systems or product lifecycle management (PLM) systems to facilitate cross-departmental communication and collaboration and ensure information transparency.

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Cultivate innovative culture and market-oriented thinking. Innovation culture: Encourage employees to innovate, set up innovation funds and reward mechanisms, and stimulate employees' creativity.Market-driven thinking: Develop market-driven thinking in employees so that they can better understand market need.

Present this material in the form of a picture, that is, an algorithm of your proposals.

The sales of various kinds of clothing business in the reporting period are as follows								
Unit: ten thousand yuan, RMB								
Source: Nanshan Zhishang prospectus, summary tabulation: China's first textile network								
type of service	From January-June, 2024		2023,		2022		2021	
	income	proportion	income	proportion	income	proportion	income	proportion
Independent brand of professional clothing	20, 204.08	60.39	52, 784.84	60.72	62, 722.90	59.65	46, 069.96	52.84
ODM/OEM business wear	12, 480.50	37.31	31, 822.12	36.60	39, 529.06	37.59	37, 468.73	42.97
Independent brand of professional clothing	769.89	2.30	2, 331.39	2.68	2, 892.85	2.75	3, 651.04	4.19
amount to	33, 454.48	100	86, 938.35	100	105, 144.82	100	87, 189.72	100

7.1. Strengthen technological innovation and digital transformation

7.1.1 Suggestions for optimizing management of innovation activities of Yantai Nanshan Zhishang

1. Strengthen technological innovation and digital transformation

(1) Continue to invest in research and development resources to improve the level of intelligence

· Increase R&D investment: Nanshan Zhishang shall continue to increase R&D expenses and maintain a steady increase in R&D expense rate to support the development of new technologies and new products.

· Promote the upgrading of intelligent manufacturing: Based on the concept of "all elements, whole industry chain, and whole life cycle", build a cloud system for intelligent textile and garment manufacturing to accelerate the digital intelligent construction of wool fabric and garment and chemical fiber industry chain.

· Optimize the production process: through intelligent transformation, introduce advanced automation equipment, such as unmanned dyeing line, automatic cutting bed, intelligent storage, etc., to further improve production efficiency.

· Strengthen data-driven decision-making: Use big data and information technology to optimize modern enterprise management systems and support the transition from empirical decision-making to intelligent decision-making.

2. Deepen the breadth and depth of digital transformation

· Improve digital infrastructure: further improve the intelligent architecture, intelligent equipment and technology application, ensure the digital transformation of logistics between equipment, and realize the production of unmanned work areas.

· Promote industrial chain collaboration: Through the interactive integration of client data, realize the ecological network interconnection of equipment and terminals, and open up the blocking points of production, distribution, circulation and consumption.

· Improve the intelligence of the supply chain: Build an intelligent logistics platform, optimize supply chain management, realize transparent visualization of logistics, and reduce resource consumption.

3. Strengthen the combination of innovation and market demand

· Market demand-oriented: Through the integrated product development mode of "design-customer design", we can directly connect with the customer's R&D system, jointly develop fabrics and clothing, and quickly meet the market demand.

· Expand the application field of new materials: Combine the unique properties of new materials such as ultra-high molecular weight polyethylene fiber, develop new products such as cool fabrics and puncture resistant clothing, and improve the functionality and market competitiveness of products.

4. Optimize innovation management and talent system

· Improve the three-level R & D system: Continue to strengthen the three-level R & D system of "cooperative research institutions", "enterprise R & D center" and "workshop innovation group", and improve the innovation ability from basic research to the production line.

· Cultivate digital talents: strengthen internal training, improve employees' digital skills, and cultivate interdisciplinary talents with data analysis, intelligent manufacturing and other capabilities.

· Encourage innovation culture: Encourage employees to actively participate in technological innovation and management innovation by setting up innovation reward mechanism.

7.1.2 What technical difficulties may be encountered in the process of digital transformation?

1. Technical complexity and legacy system integration

Challenges: An enterprise's existing technology infrastructure often contains aging legacy systems that are difficult to integrate seamlessly with emerging technologies (e.g., cloud computing, artificial intelligence), leading to data silos and inefficiencies.

· Solution:

Adopt a progressive upgrade strategy to gradually replace legacy systems through modular design and microservices architecture.

Use middleware technology or API integration platform to achieve seamless connection between the old and new systems.

Implement a hybrid cloud strategy, combining public and private clouds to achieve flexible expansion and efficient integration.

2. Data governance and security risks

· Challenges: The amount of data is growing exponentially, but the data is scattered across different systems and difficult to manage uniformly. At the same time, the stringent requirements of data privacy protection regulations, such as GDPR, increase the pressure on enterprises to comply.

· Solution:

Build a unified data governance framework that clarifies data ownership and usage rules.

Use privacy-enhancing technologies such as data encryption, anonymization, and distributed storage to reduce the risk of privacy breaches.

Track and manage data compliance in real time with compliance automation tools.

3. Technology implementation and business integration

· Challenge: The lack of effective communication between the technical team and the business department makes it difficult for the technical solution to meet the business needs and the cross-department collaboration is not smooth.

· Solution:

Set up cross-functional working groups to ensure that business and technical teams jointly define requirements and implementation goals.

Establish an information sharing platform to facilitate data sharing and information flow.

Build a two-way feedback mechanism to continuously optimize the design and implementation plan.

4. Data security and privacy protection

Challenges: As digital transformation accelerates, the risk of data breaches increases, and companies face significant fines and reputational damage.

· Solution:

A Zero Trust architecture ensures that every access request is rigorously verified.

A data governance platform is introduced to centrally manage data and incorporate encryption technology.

5. Adaptation and training of employees to new technologies

Challenges: employee resistance to new technologies and the mismatch between existing skills and digital needs.

· Solution:

Drive cultural change to reduce resistance through leadership demonstrations and internal communication.

Establish a continuous training mechanism to help employees acquire digital skills.

6. Disconnect between technology selection and strategy

Challenges: Companies develop ambitious digital strategies, but when it comes to implementing them, there is a lack of detailed architecture, from strategy to technology, resulting in a disorderly allocation of resources.

· Solution:

Create a systematic architectural blueprint that aligns business needs, strategic goals, and technical implementations.

Establish a standardized architecture governance framework to ensure that technical solutions can adapt to business needs in real time.

7. Project management and resource allocation

Challenges: Digital transformation projects are complex, involve multiple departments and systems, and are prone to project schedule delays and waste of resources.

· Solution:

Adopt agile development methods to quickly iterate projects and reduce the waste of resources caused by changes in requirements.

Establish a project management platform to monitor project progress and resource usage in real time.

7.2. Deepen industry-university-research cooperation

7.2.1 Deepen industry-university-research cooperation, expand cooperation areas, and strengthen joint innovation with universities and scientific research institutions

Yantai Nanshan Zhishang has achieved remarkable results in industry-university-research cooperation, through close cooperation with Yantai Nanshan University, Shandong Nanshan Institute of Science and Technology and other universities and research institutions, to achieve the deep integration of technological innovation and industrial transformation. In order to further deepen industry-university-research cooperation and expand cooperation areas, the following optimization suggestions can be considered:

1. Expand cooperation areas

· Interdisciplinary cooperation: In addition to the existing textile and apparel fields, it can be extended to emerging technology fields such as big data, artificial intelligence, and the Internet of Things to explore the combination of smart textile and digital manufacturing.

· Industrial chain extension: Strengthen cooperation in upstream and downstream industrial chains, for example, carry out joint innovation in raw material research and development, high-end equipment manufacturing, environmental protection technology and other fields.

2. Strengthen joint innovation

· Project-driven cooperation: Promote key technological breakthroughs through joint application of provincial and national scientific research projects. For example, the project of "Research and Application of polyethylene fiber production technology based on haloalkane as extractant system" jointly declared by Yantai Nanshan University and Nanshan Zhishang has been approved.

· Co-construction of innovation platform: Continue to deepen the co-construction of laboratories, engineering research centers, industrial innovation research institutes and other platforms to promote resource sharing and technology transformation.

3. Optimize cooperation mechanisms

· Double-skilled team building: Further strengthen the construction of the "scientist + engineer" joint team, attract more technical backbone of enterprises to

participate in teaching and scientific research, and improve the practical ability and innovation ability of the team.

· Collaborative education mode: Through the "school-enterprise-school" joint research and development mode, promote scientific research results to feed teaching and cultivate high-quality applied talents.

4. Strengthen the transformation of results

· Accelerate the industrialization process: rapidly transform scientific research achievements into actual productivity. For example, the project "Development and application of flame retardant worsted fabric" has successfully achieved industrialization and won the award of Excellence in innovation achievements of industry-university-research cooperation.

· Establish a long-term cooperation mechanism: continue to explore new cooperation and innovation points through regular school-enterprise forums, joint seminars and other forms.

5. Enhance cooperation influence

· Participate in the formulation of industry standards: With the help of industry-university-research cooperation platform, actively participate in the formulation of industry standards to enhance the influence of enterprises in the industry.

· Expand international exchanges: Strengthen cooperation with internationally renowned universities and research institutions, carry out transnational joint research projects, and enhance the level of international cooperation.

7.2.2 How to balance the relationship between theory and practice in industry-university-research cooperation?

1. Clear cooperation goals and demand-orientation

· Industry-university-research cooperation should be market demand-oriented to ensure that theoretical research is closely integrated with practical applications. Universities and research institutions need to have a deep understanding of the technological needs and market pain points of enterprises, and turn these needs into research topics.

· Enterprises need to feedback their technical problems to universities to provide direction for theoretical research and practical scenarios for students.

2. Build a "double-skilled" team

· Colleges and universities should strengthen cooperation with enterprises and hire technical backbone of enterprises as part-time teachers to participate in theoretical teaching and practical guidance.

· Enterprise engineers and university teachers jointly conduct scientific research projects to promote the deep integration of knowledge and practice.

3. Optimize curriculum and practice system

· Colleges and universities should dynamically adjust the curriculum system, integrate cutting-edge technologies and practical cases into the teaching content, and ensure that theoretical teaching is closely integrated with industry needs.

· Promote project-based learning, case teaching and other methods, so that students can improve their theoretical level and practical ability in solving practical problems.

4. Strengthen the construction of practice platforms

· Establish school-enterprise joint laboratories, training bases and innovation and entrepreneurship platforms to provide students with a real practice environment.

Students are encouraged to participate in real projects of enterprises and enhance practical ability through "learning by doing".

5. Promote the two-way transformation of knowledge and technology

· Universities should quickly transform scientific research achievements into actual productivity, and support the development of enterprises through technology transfer and patent licensing.

· Enterprises need to feed back technical problems in actual production to colleges and universities to promote theoretical innovation.

6. Establish a collaborative education mechanism

· Promote the integration mode of industry, university, research and application, and break the barriers between theory and practice through joint training, internship and training, and cooperation in scientific research projects.

· Establish a school-enterprise personnel exchange mechanism, support teachers to take temporary positions in enterprises and improve their practical ability.

7. Improve the evaluation and feedback mechanism

· Establish an evaluation system oriented by innovation ability and practical ability to ensure that the effectiveness of industry-university-research cooperation can be evaluated scientifically.

Conduct regular evaluation of cooperation results, adjust cooperation strategies according to feedback, and ensure the balance between theory and practice.

7.3. Improve innovation incentive mechanism

7.3.1 In order to improve innovation incentive mechanism and retain innovative talents, enterprises can build a diversified incentive system from the following aspects:

1. Optimize compensation and performance incentives

· Establish a diversified salary system: Build a diversified salary structure with "post salary + performance salary + achievement reward + equity incentive" as the core. Differentiated compensation is given to innovative talents according to their post value, performance contribution and innovation results, and core talents are deeply bound to corporate interests through equity incentives.

· Implement medium and long-term incentive measures: For key innovative talents, equity, option or dividend incentives will be implemented to encourage them to invest in innovation projects for a long time and improve the transformation efficiency of innovation results.

2. Provide room for career development and growth

· Smooth career promotion channels: Establish dual-track promotion channels for technical and management sequences, so that innovative talents can obtain the same career development and honorary treatment as management positions in professional and technical fields.

· Provide training and learning opportunities: Help innovative talents improve their professional ability and broaden their horizons through internal training, external study and academic exchange.

3. Strengthen the spirit incentive and honor mechanism

· Set up honorary awards: regularly select honorary titles such as "Innovation Contribution Award" and "Outstanding Innovation Team Award" to commend individuals and teams that have outstanding performance in innovation projects.

· Create a cultural atmosphere that respects innovation: display innovative achievements and contributions of innovative talents through internal publicity and media reports to enhance their sense of accomplishment and sense of belonging.

4. Improve innovation support and guarantee mechanism

· Provide innovation resource support: Set up a special innovation fund to support innovative talents to carry out cutting-edge research and exploratory projects.

· Optimize the assessment of innovation projects: appropriately extend the assessment cycle of innovation projects, pay attention to the accumulation and value release of medium and long-term results, and avoid prematurely denying projects with potential due to insufficient short-term performance.

5. Strengthen incentives in industry-university-research cooperation

· Improve the cooperation benefit distribution mechanism: In industry-university-research cooperation, clarify the rights, responsibilities and interests of all parties to ensure that the benefits of innovation results can be reasonably distributed to all parties involved, especially researchers in universities and research institutions.

· Encourage enterprises to fund basic research: Encourage enterprises to invest more resources to support basic research in universities and research institutions through tax incentives and post-government subsidies, and provide source support for innovation.

6.3.2 How to balance the incentive needs of employees at different levels?

It is an important subject in enterprise management to balance the incentive needs of employees at different levels. Employees at different levels have differences in career goals, work content and psychological needs, so it is necessary to design multi-level and differentiated incentive mechanisms to meet their needs and stimulate work enthusiasm. Here are some specific strategies and suggestions:

1. Identify the needs of employees at different levels

· Grassroots staff:

Demand characteristics: More attention to stability and immediate rewards, such as salary, benefits, working environment and job security.

Incentive focus: Provide a competitive salary, a good working environment and a clear career path.

· Middle-level employees:

Requirements: Focus on career development, team management ability and sense of accomplishment.

Incentive focus: Provide training opportunities, promotion pathways, team building support and performance rewards.

· Senior staff:

Demand characteristics: Focus on corporate strategic objectives, long-term returns and corporate impact.

Incentive focus: Provide equity incentives, strategic decision-making rights, corporate honor and social status promotion opportunities.

2. Design multi-level incentive mechanism

· Salary and Benefits:

Differentiated pay structure: Design a differentiated pay system according to the value and level of the position to ensure that the salary matches the contribution of the employee.

Diversified benefits: Competitive benefits packages, such as health insurance, paid leave, flexible work, etc., are available to meet the needs of employees at different levels.

· Performance and reward:

Performance appraisal differentiation: According to the characteristics and levels of the position to develop different performance appraisal indicators to ensure the fairness and scientific assessment.

Reward diversity: Set up different types of reward mechanisms, such as instant reward, quarterly reward, annual reward, etc., to motivate employees for short-term and long-term contributions.

· Career Development and training:

Customized training plan: Provide targeted training for employees at different levels, such as skills training for grass-roots employees, management training for middle-level employees, and strategic training for senior employees.

Promotion channel transparency: clear promotion standards and paths, so that employees can see the hope of career development.

3. Strengthen spiritual motivation and corporate culture

· Honors and Recognition:

Set up honorary awards: according to the characteristics of employees at different levels, set up "excellent employee award", "excellent team award", "innovative contribution award", etc., to publicly commend outstanding performance.

Leadership recognition: Through the praise of senior leaders, internal communication and other ways to enhance employees' sense of accomplishment and belonging.

Corporate culture construction:

Create a positive corporate culture: Through team building activities, corporate culture training and other ways to enhance the cohesion and belonging of employees.

Value guidance: Integrate corporate values into the incentive mechanism to encourage employees to strive for excellence, innovation and teamwork.

4. Offer personalized incentives

Employee needs research: Conduct employee needs research regularly to understand the real needs and expectations of employees at different levels.

Personalized incentive programs: Based on the survey results, provide personalized incentive programs for different levels of employees, such as flexible working hours, remote work opportunities, special project participation, etc.

5. Establish dynamic feedback and adjustment mechanism

Regular evaluation of incentive effect: Through performance evaluation, employee satisfaction survey, etc., regularly evaluate the effectiveness of incentive mechanism.

Dynamic adjustment of incentive scheme: According to the changes of enterprise development and employee needs, timely adjustment of incentive mechanism to ensure its continuous effectiveness.

6. Balance material and non-material incentives

Material incentives: Ensure that compensation and benefits are competitive in the market, while providing additional financial returns through performance bonuses, equity incentives, etc.

Non-material motivation: Meet the non-material needs of employees through career development opportunities, training, honors, teamwork, etc.

· Practical cases

Google, for example, addresses the needs of employees at all levels by offering competitive compensation and benefits, flexible work environments, extensive training opportunities and open promotion mechanisms. At the same time, Google encourages employees to freely explore innovative projects through the "20% time" policy, which meets the needs of employees for self-realization.

7.4. Improve the systematization and synergy of innovation management

7.4.1 Improve the systematization and synergy of innovation management

1. Strengthen internal communication and collaboration

· Establish a transparent information sharing mechanism: realize real-time information sharing and update through a unified communication platform (such as PingCode, Worktile, etc.) to ensure that team members can obtain key information such as project progress, task assignment and company strategy at any time.

· Regularly organize cross-departmental meetings and collaboration groups: break down departmental barriers, promote understanding and cooperation between different departments through cross-departmental meetings and collaboration groups, and jointly solve problems in the project.

· Cultivate an open communication culture: advocate an open, inclusive and respectful communication atmosphere, encourage employees to actively express their opinions and suggestions, and reduce information islands.

· Implementation of information transparency: Timely disclosure of key information such as corporate strategy and operation through internal announcements, emails, etc., to enhance employees' sense of identity and belonging.

2. Optimize the innovation process

· Introduction of new technologies and innovative methods: Pay attention to the development of new technologies (such as artificial intelligence, big data), introduce them into the innovation process, and improve the level of intelligence and automation.

· Simplify processes and optimize resource allocation: eliminate cumbersome links, shorten work cycles, and redistribute human, material and other resources according to the actual situation to ensure maximum resource utilization.

· Continuous improvement and evaluation: Regularly evaluate the operation effect of existing processes and systems, and adjust and optimize them according to the actual situation.

3. Build a systematic innovation management system

· Follow international standards: Take a holistic view of innovation with reference to international standards such as ISO 56001, and provide a systematic approach to managing innovation activities to enhance innovation capabilities and performance.

· Define the common goal of the innovation process: make all departments realize the value of optimizing the innovation process to the enterprise, and form a joint effort to promote the process optimization.

4. Provide support and training

· Strengthen training and skills improvement: enhance the professional quality and innovation ability of employees through internal training and external seminars.

· Cultivate innovation awareness: Encourage employees to put forward innovative opinions and suggestions, and cultivate the enterprise's innovation culture and atmosphere.

7.4.2 How to balance the interests of different departments in innovation management?

1. Identify common goals and priorities

Ensure that all departments have a clear understanding and agreement on the overall objectives of the organization, and define the roles and responsibilities of each department in achieving the common objectives. This will help reduce inter-departmental conflicts of interest and enhance the impetus for cooperation.

2. Establish a fair benefit distribution mechanism

Principle of equity: Profit distribution should be adjusted according to the contribution, risk bearing and resource input of various departments, avoid egalitarianism, and ensure the fairness and rationality of distribution.

Dynamic adjustment mechanism: According to the progress of the project and the actual contribution of each department, timely adjust the benefit distribution ratio to ensure that the interests of all parties are consistent with the overall interests of the project.

3. Strengthen cross-departmental communication and collaboration

Establish communication channels: Facilitate information sharing and communication between departments through regular cross-departmental meetings, workshops or sharing platforms to reduce misunderstandings and conflicts.

Create cross-functional projects: Bring people from different departments into the same project team to promote collaboration through common goals and tasks.

4. Set up incentive and reward mechanisms

Fair competition mechanism: Encourage healthy competition among departments, set up incentive mechanisms to encourage innovation, and ensure the fairness of the competitive environment.

Cross-departmental cooperation award: To commend and reward individuals and teams that have outstanding performance in cross-departmental cooperation, to enhance the enthusiasm of cooperation.

5. Foster a culture of cross-departmental cooperation

Diverse thinking: Encourage employees to think from different perspectives and promote cross-functional cooperation and innovation.

Values of cooperation: Through training and development programs, to develop the ability of team work and cross-departmental cooperation.

6. Leader's guidance and coordination

Leaders play a key role in innovation management and need to guide various departments to establish good cooperative relationships, resolve conflicts in a timely manner, and ensure the smooth advancement of innovation activities.

7. Optimize innovation process and resource allocation

Process optimization: Streamline the innovation process, ensure that the roles and tasks of each department in the project are clear, and avoid wasting resources.

Resource sharing: Allocate resources properly to ensure that all departments can get the necessary support according to the project needs.

CONCLUSIONS

This paper analyzes the management of innovation activities in Yantai Nanshan Zhishang Technology Co., LTD., and discusses its practice and effectiveness in innovation strategy, organizational structure, process management, talent incentive, digital transformation and industry-university-research cooperation. The research results show that Nanshan Zhishang has made remarkable achievements in promoting technological innovation and management innovation, but also faces some challenges and shortcomings.

Clear innovation strategy and goals. Nanshan Zhishang has realized the transformation and upgrading from traditional manufacturing to intelligent and digital by constructing the "six modernization" operation and management mode of "number intelligence and quality drive" (marketing precision, design collaboration, supply agility, manufacturing flexibility, service lifetime and scientific decision-making). With industry chain innovation as the core, the company has formed a complete industry chain from wool to clothing, and through the joint development of upstream and downstream enterprises, it has accelerated the transformation and application of technological achievements.

Innovative organization and talent management. Nanshan Zhishang has established a "three echelon" innovation system, covering senior technical personnel, middle managers and new employees, and has enhanced the overall innovation ability through hierarchical management. At the same time, through industry-university-research cooperation, the company has built laboratories and innovation platforms with universities and scientific research institutions to cultivate high-quality applied talents.

Digital transformation and intelligent upgrading. The company continues to invest in research and development resources, the introduction of intelligent equipment and information systems, such as ERP, MES, CRM, etc., to achieve the digital management of the entire production process. Through intelligent

transformation, Nanshan Zhishang not only improves production efficiency, but also reduces operating costs.

Perfect innovation incentive mechanism. Nanshan Zhishang has established a diversified incentive system to stimulate the innovation enthusiasm of employees through equity incentives, performance rewards, non-material incentives (such as honorary titles, promotion opportunities) and other ways. The company has also set up a special innovation fund to support cutting-edge research and exploratory projects.

Industrial chain collaborative innovation. Through the collaborative innovation model of the industrial chain, Nanshan Zhishang has formed a linkage development system with upstream and downstream enterprises, and promoted the rapid transformation and application of new fiber, auxiliary and other technologies. This model not only optimizes the allocation of resources, but also enhances the competitiveness of the entire industrial chain.

Systematic inadequacy of innovation management. Although the company has achieved fruitful results in technology research and development and product innovation, there is still room for improvement in the systematic aspect of innovation management. For example, how to better integrate innovation results with market demand and how to further optimize innovation processes are issues that companies need to further explore.

Shortage of high-end talents. Nanshan Zhishang may face a shortage of high-end talents in high-end technology research and development and innovation management. Although the company cultivates talents through cooperation with universities, it still needs to strengthen in attracting and retaining high-end talents.

Competitive pressure in the international market. Under the background of globalization, the brand influence of Nanshan Zhishang in the international market still needs to be improved. The company needs to further strengthen brand building and international market expansion to cope with international competition.

Collaborative efficiency in industry-university-research cooperation. Nanshan Zhishang has achieved remarkable results in industry-university-research

cooperation, but there is still room for improvement in collaborative efficiency. For example, how to better balance the relationship between theoretical research and practical applications, and how to further optimize the cooperation mechanism are problems that the company needs to further solve.

Technical bottlenecks in digital transformation. In the process of digital transformation, companies may face issues such as technical complexity and legacy system integration, data governance and security risks, and technology implementation and business integration. These issues can affect the speed at which a company's digital transformation moves forward.

With the technological progress of the industry and the intensification of market competition, enterprise innovation management will face more opportunities and challenges. Future research can further explore the following directions: dynamic adaptability of enterprise innovation: study how enterprises dynamically adjust their innovation strategies according to market and technological changes. Sustainability of innovation management: Explore how companies can achieve long-term sustainable development through innovation management. Depth and breadth of digital transformation: Research on how enterprises can break through technical bottlenecks in digital transformation and achieve deeper intelligent upgrading. Optimization of industry-university-research cooperation: Explore how to further enhance the collaborative efficiency of industry-university-research cooperation and achieve a deep integration of theory and practice.

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