

Thoughts and Suggestions on Implementing Full-Staff Innovation in Enterprise-Type Research Institutes

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Abstract: Enterprise-type research institutes are the core carriers of technological innovation in enterprises, with the core mission of breaking through key technologies and supporting the long-term strategic development of enterprises. Total innovation is not about "everyone coming up with ideas", but rather about integrating the innovation gene into the entire process of research and development, management, etc., which has profound significance for its long-term development. This article takes innovation as the primary driving force and talent as the primary resource, relying on the "strategy of revitalizing enterprises through science and technology" to integrate internal and external resources. It proposes specific suggestions for strengthening total innovation in enterprise-type research institutes from eight key dimensions, including total goal management, multi-dimensional assessment, optimization of employee promotion channels, and the "posting a challenge and taking the lead" model. It points out that total innovation is its "strategic upgrade engine", which can achieve bidirectional empowerment of "technological innovation" and "talent development", supporting the long-term competitive advantage of enterprises.

Keywords: Enterprise-type research institutes, innovation by all staff, implementation path, suggestions for improvement.

1. Introduction

As the core carrier of an enterprise's technological innovation, the core mission of enterprise-type research institutes is to break through key technologies, incubate cutting-edge products, and support the long-term strategic development of the enterprise. Implementing full-staff innovation is not merely a simple "call for ideas from all staff"; rather, it involves infusing the gene of innovation into all processes, including research and development (R&D), management, and collaboration, thereby unleashing the value-creating potential of every member. This initiative holds multi-dimensional and in-depth strategic significance for the long-term development of both the research institute and the enterprise.

2. Implementation Paths

With innovation as the primary driving force and talent as the primary resource, and aiming to serve the high-quality development of the region and meet the people's aspiration for a better life, we will adhere to the dual drive of scientific and technological innovation and talent development to comprehensively enhance the scientific and technological innovation capability and level of the research institute. We will carry out basic research, technological R&D and services, and achievement transformation, focusing on the economic front of high-quality development in the region where we are located.

Closely centering on the "strategy of invigorating the enterprise through science and technology", we will make full use of the internal and external scientific and technological resources as well as technical forces of the research institute. By applying scientific management mechanisms and methods, we will establish and improve a flexible and efficient scientific and technological innovation system. Led by the scientific research management department of the research institute, we will actively guide and cultivate relevant

researchers to engage in scientific and technological innovation work. With the goal of fostering the core technological capabilities of the research institute, we will make scientific and technological innovation a solid technical support and an inexhaustible driving force for the sustainable development of the research institute^[1].

3. Suggestions for Enhancing Full-Staff Innovation in Enterprise-Type Research Institutes

We should adhere to the "dual-drive" of scientific and technological innovation and institutional mechanism innovation. By promoting institutional mechanism innovation to boost scientific and technological innovation, we will stimulate the vitality of scientific and technological innovation.

(1) Adhering to Goal Orientation and Engaging All Staff in Goal Management

Divide the annual performance goals into three categories: assurance goals, development goals, and breakthrough goals. We will make every effort to conduct systematic planning, refine work tasks, quantify responsibility indicators, clarify timelines and completion standards, and implement itemized decomposition and checklist-based management^[2]. The annual task goals will be broken down to each department (unit) and further to each individual, so as to solidly and thoroughly implement goal management. We will create an environment where everyone participates in goal management and contributes to it, thereby pooling the joint efforts of all staff to fulfill their duties.

(2) Strengthening Multi-Dimensional Evaluation and Precisely Designing the Assessment System

Give full play to the "baton" role of performance assessment. Guided by strengthening positive incentives, we will scientifically optimize the performance assessment plan. We will establish the assessment concept of "prioritizing quality while considering efficiency, conducting classified

assessment to respect differences, and covering all staff with assessment down to the individual". Combined with the actual work of each position, we will customize assessment plans and build a refined, multi-dimensional, and all-round evaluation system. We will adopt a combination of the overall performance of departments (units) and individual achievements, quantitative indicators and bonus incentives, as well as leadership evaluation and democratic appraisal. Through assessment to promote application, we will link the assessment results to bonus distribution, position promotion, selection and appointment, and recommendation for advanced awards^[3]. This will encourage employees to take the initiative to assume responsibilities and perform their duties proactively, creating a sound atmosphere for dedicated work and striving for progress.

(3) Optimizing the Post Mechanism and Opening Up the Employee Promotion Channel

We will innovate the talent management model and open up a dual-channel promotion path for scientific and technological personnel and management personnel. We will formulate special methods for the post setting and post promotion of scientific and technological R&D personnel, clarify the promotion conditions for researchers' positions, and establish conditions for exceptional and jump-level promotion^[4]. For those who have made outstanding contributions in major scientific research achievements and other aspects, exceptional and jump-level promotion will be allowed, so as to further stimulate the enthusiasm, initiative, and creativity of researchers.

(4) Innovating Talent Cultivation and Establishing an Academic Backbone Team

Targeting grassroots researchers across the institute, we will establish an academic backbone team that spans functions and departments. Those selected will independently form research teams and receive monthly subsidies to promote the smooth progress of innovative projects and the transformation of achievements. The aim is to cultivate and develop a group of high-level talents with innovative capabilities and development potential within the research institute, build a high-quality research team, and further improve the level of scientific and technological innovation.

(5) Consolidating the Foundation of Innovation and Solidly Carrying Out Scientific Research Projects

Basic research is the source of scientific and technological innovation, and the implementation of scientific research projects is an important means for the research institute to consolidate basic research. We will encourage all staff to participate in the application for various scientific research projects, such as the National Natural Science Foundation of China, provincial science and technology development plan projects, internal scientific research projects, and pre-research projects^[5]. We will implement dynamic supervision and guidance throughout the entire process of scientific research project implementation, focus on cultivating the scientific literacy of all staff and the construction of research integrity, and lay a solid foundation for the output of landmark achievements and the application of achievement transformation.

(6) Based on the "Three Orientations" and Establishing the "Leader Recruitment for Project Tackling" Model

Orienting towards the world's frontier of science and technology, the economic front, and the major national needs, we will formulate the implementation measures for the "leader recruitment for project tackling" in the research

institute's scientific and technological innovation and fully implement this work model. In response to the urgent, difficult, dangerous, and arduous tasks of the research institute, the tackling of landmark achievements, and the solving of technical problems, we will set themes for "leader recruitment for project tackling", clarify work requirements, and issue project announcements to the entire institute. Competition will be used to stimulate the awareness of innovation and accelerate the improvement of the scientific and technological innovation capabilities of all staff.

(7) Creating a Relaxed Atmosphere and Building an Open Innovation Platform

We will consolidate and improve the existing scientific research platforms and optimize the allocation of scientific and technological resources. With the enterprise as the main body of innovation, we will cooperate with major scientific research institutions and universities, establish cooperative relationships with external innovation institutions or partners, absorb external innovation resources, and promote the improvement of innovation capabilities. We will encourage researchers to participate in interdisciplinary and cross-industry projects to broaden their horizons, cultivate flexible thinking and innovation capabilities, and carry out strategic, forward-looking, basic, and comprehensive scientific and technological innovation activities.

(8) Deepening Research Integrity and Creating an Atmosphere for Scientific and Technological Innovation

With the value concept of advocating contributions, we will purify the scientific research environment, encourage bold innovation, promote the spirit of science, and build a sound scientific and technological innovation culture and atmosphere. We will strengthen the construction of scientific research culture, create an academic atmosphere that advocates science, and form a good scientific and technological innovation ecosystem characterized by the pursuit of truth, a down-to-earth attitude, the courage to explore, and the willingness to contribute^[6]. We will strictly manage research integrity, strengthen the publicity and education on research integrity, and promote the formation of a sound atmosphere that advocates integrity and practices integrity.

4. Conclusion

Full-staff innovation is the "strategic upgrading engine" of enterprise research institutes. For enterprise-type research institutes, full-staff innovation is not a "formalized collection of ideas", but a strategic transformation from "technology-driven" to "ecosystem-driven". By activating the value of individuals, we can break through R&D bottlenecks; by accelerating the closed-loop of collaboration, we can promote the implementation of achievements; and by carrying out decentralized exploration, we can enhance risk resistance capabilities. Ultimately, we will realize the two-way empowerment of "technological innovation" and "talent development", providing core support for the long-term competitive advantages of the enterprise.

References

- [1] Zhu, S. Z., Nie, F., Mao, Y. M., & Wu, B. C. (2022). Thoughts and Suggestions on Improvement of Technological Innovation and Performance by SOE Research Institutes under New Situation. *Petroleum Science and Technology Forum*, 41(4), 11-17.

- [2] Zhang, H. X. (2013). Research on the Evaluation of Enterprise Full-Staff Innovation Mechanism Construction Based on Extension Theory (Master's thesis). Kunming University of Science and Technology.
- [3] He, C. P., & Dai, J. F. (2024). Full-Staff Innovation Ignites the Core Competitiveness of Enterprises. *Chinese Businessman*, (05), 166-167.
- [4] Liu, Z., & Wei, S. J. (2021). Practice and Thoughts on Full-Staff Innovation in State-Owned Enterprises. *Journal of Tianjin Federation of Trade Unions Administrative Cadre College*, 38(03), 46-50.
- [5] Wang, X. D. (2021). Transforming Innovation Vitality and Creative Ability into Development Momentum: Practice and Thoughts on the Innovation Work of Enterprise Staff in All Posts. *Chinese Workers*, (06), 48-49.
- [6] Zhi, W. G. (2020). Discussion on the Technical Methods of Enterprise Employees' Innovation and Creation. *Modern State-Owned Enterprise Research*, (09), 32-37.