

Research and Optimization of Enterprise Standard System Construction Method Based on Process Analysis

Fengyi Zhao

*Business Operation, Intercontinental Exchange, Atlanta, Georgia, 30328, United States
fengyi9803@gmail.com*

Keywords: Process analysis; Enterprise standard system; Business process optimization; Standardization construction; Integration of technical elements; Standardized management; Integration of standards and processes; Enterprise operation efficiency

Abstract: The construction of enterprise standard system often faces the problem of disconnection from the actual business process, resulting in the standard can not be effectively embedded in the daily operation of the enterprise, reducing the management efficiency and execution consistency. Aiming at this problem, this paper proposes a standard system construction and optimization strategy based on process analysis. This method takes business process as the core, through systematic process analysis, deeply identifies the technical, management and post elements in each link of the enterprise, and then integrates, simplifies and optimizes them to build a standardized system covering the whole chain of enterprise production, operation and management. By combining standards with business processes, it improves operational accuracy and management standardization, ensuring that enterprises can remain highly flexible and competitive in a dynamic market environment. Based on the actual cases of enterprise standard system construction, this paper discusses how to solidify key business processes through standards, and puts forward innovative ideas of optimizing the collaboration between processes and standards, which provides theoretical support and practical guidance for enterprises to cope with future market changes and internal and external challenges, and further promotes the depth and breadth of enterprise standardization construction.

1. Introduction

In recent years, with the transformation of enterprise management mode, the construction method of enterprise standard system has gradually developed to the direction of process management. The national standards such as GB/T 15496 revised in 2018 abandoned the traditional technical standard-based model, adopted a more systematic process management thinking, and was more in line with the operational needs of modern enterprises. Factor analysis method and process analysis method are the two main methods in the construction of enterprise standard system. Process analysis method integrates and optimizes technology, management and job responsibilities through business process sorting to form a standard system covering all aspects of the enterprise, which can effectively solve the problem of disconnection between standards and processes. Although process analysis requires a high level of professional experience for standard builders, it

has a unique advantage in enhancing the synergy between standards and processes. This paper discusses the application of this method in the construction of standard system and its optimization strategy, and emphasizes the importance of solidifying process and enhancing standardization flexibility through process management ideas.

2. Related Research

By introducing the idea of process management, it can not only solidify key business processes, but also enhance the flexibility and adaptability of the standard system, providing a more flexible standardization framework for enterprises to cope with future challenges. This optimization strategy can promote a high degree of synergy between standards and processes in a complex business operating environment, significantly improving the overall operational efficiency of the enterprise. NGu team adopted FAHP analysis method to establish a comparison matrix and explored the construction of a CMMI model-based evaluation system model for the improvement of the digital management process of the second-hand car trading market^[1]. In this study, NBTPE, a representative product in the domestic travel field, was selected and the system dynamics method was applied to further form the safety input rule diagram based on the analysis of the influence on internal and external safety input^[2]. W Zhao's team used a microservices architecture to build a digital twin system for controlling machining errors in thin-walled parts. Aiming at the knowledge base for dynamic characteristics analysis of thin-walled parts, a method for establishing a digital twin system with the best coupling degree at the processing unit level was proposed^[3]. YD Si team proposed a maintenance task package determination method based on the analysis of generalized maintenance cost (including maintenance cost, wear cost and maintenance time) for aircraft preventive maintenance tasks^[4].

3. Construction Framework of Enterprise Standard System Based on Business Process Analysis

A business process is a series of interconnected activities performed by different roles in order to achieve a specific value goal, with a clear chronological order and division of responsibilities. The production, operation and management activities of each enterprise constitute a complex flow network. In this context, the enterprise standard system aims to achieve standardized management around various business links, and must rely on in-depth business process analysis to ensure that the standard effectively reflects the actual operational needs. In the construction of the standard system, it is necessary to conduct a comprehensive review of the internal business process, establish a basic framework based on the main process framework, identify key technical requirements, management needs and job responsibilities, coordinate and optimize, and form a feasible standard. This process not only improves operational efficiency, but also provides the basis for continuous improvement and innovation, allowing companies to flexibly respond to challenges in a dynamic market environment, and enhances team collaboration and customer satisfaction.

3.1 Research on Business Process Analysis and Decomposition Strategy

At present, the research on process management at home and abroad has formed a variety of theoretical and practical methods, which provides rich options for business process analysis. Just as the value analysis method divides the business process into value-added and non-value-added activities through a customer-centric perspective, it helps enterprises identify and eliminate inefficient links and optimize resource allocation. The Key success factor law focuses on identifying those activities and factors that are critical to the success of the company, and further

enhancing the competitiveness of the company by optimizing around these key points. The Balanced scorecard rule translates strategic objectives into specific performance indicators, ensuring that each business link is aligned with the overall strategy of the company.

Although these methods have their own advantages and are suitable for different types of enterprises and business stages, in practical applications, enterprises should flexibly choose suitable analytical tools according to their own characteristics and development goals. This flexibility not only improves the operational efficiency of the process, but also ensures that the construction of the standards system is closely aligned with the enterprise strategy. By effectively integrating these methods, companies can not only standardize management, but also maintain innovation and adaptability in a rapidly changing market environment, thereby enhancing their competitive advantage. Continuous process analysis and optimization will be an important strategy to improve the efficiency of business operations and adapt to market changes.

This example shows how the value analysis method is used to break down the production process. It divides the process into two main parts: the product realization process and the foundation support process. By separating the workflow in this manner, a hierarchy is created. This hierarchy has many useful applications. Clearly defines the distinction between the main process and related subprocesses. This ensures that each step in the workflow is clearly understood. This distinction is important to improve understanding and accountability within the organization. By clarifying these differences, individual tasks can be better managed and coordinated.

This method lays a solid foundation for standardization management in the future. By scheduling workflows at different levels, organizations can more easily achieve effective control. This helps ensure that the operations of each process are aligned with the overall business goals. This structured approach promotes smoother operations within the organization. Lays the foundation for greater standardization of all operations in the enterprise.

Several major processes can be identified during product realization. These include marketing, design and development, procurement, product implementation planning, production and supply, product process monitoring, nonconforming product handling, product delivery and after-sales service. Each of these major processes can be broken down into more specific sub-processes. As in marketing, it can be further subdivided into market research, demand analysis, and promotional strategies. The basic assurance process can also be subdivided. This includes areas such as general management, infrastructure and equipment management, energy management, occupational health and safety management, environmental management, information management and system assessment.

This systematic approach involves breaking the process down into smaller, manageable parts. It helps the organization clearly define the specific responsibilities and objectives of each process. It ensures that every step is carried out efficiently. The best management results occur when processes are presented as clear activities that can be managed by a single person. This detailed breakdown allows for better control and supervision of each process.

When companies focus on setting strong standards, they see significant improvements in overall operational efficiency. Ensuring that these standards match real business practices helps organizations promote smoother workflows. It also helps reduce inconsistencies. This consistency is important for maintaining high quality and maintaining effectiveness across different functions.

This approach is important for improving a company's ability to adapt to rapidly changing and complex markets. Maintaining flexibility while pursuing continuous improvement gives the company a strategic advantage. This allows the company to react quickly to changes in market conditions or customer needs. This structured approach makes the operation easier. It also strengthens the company's competitive position by promoting resilience in the face of change and encouraging innovation.

3.2 Business Process Optimization and Strategy Research

After the construction of enterprise standard system, it is very important to optimize and transform the business process. With the adjustment of business processes, existing standards may need to be revised, increasing the workload of enterprises. The disconnect between standards and actual business can also create potential problems if not revised in time. Once it is determined that business processes need to be optimized and reengineered, this process should take precedence over the construction of standards and the development of standards. Although the research on process optimization is relatively mature, this paper will not discuss it in depth. After completing the analysis, subdivision and optimization of the business process, the enterprise should identify the technical and management requirements of the main process and its sub-processes (usually level 1 or level 2 sub-processes) according to the basic requirements of the standard system, and specify the technical standards and management standards required to be formulated. When refining the business process to a specific post (that is, the last level of sub-process), the specific requirements of the post should be clarified and the corresponding working standards should be formulated. The result of this analysis will provide strong support for the construction of each sub-system module in the enterprise standard system. For example, the business process can be divided into product realization process and basic guarantee process. The product realization process includes seven main processes, including design and development, procurement, product implementation planning, production and provision, product process monitoring and nonconforming product control, marketing, product delivery and after-sales service. These seven main processes constitute the seven sub-systems of the product realization standard system, and the post standards identified based on the last level of sub-processes can independently form the post standard system for daily management and execution.

4. Optimize and Standardize Enterprise Business Processes by Means of Standardization

After completing the construction of the standard system based on process analysis and the preparation of the standard rules, the enterprise officially enters the key stage of standard formulation. At present, the lack of standardized and standardized business processes not only affects the economic benefits of enterprises, but also may bring environmental problems. It is particularly important to construct a standard system that conforms to the goal of a national conservation-oriented society, which has a far-reaching impact on the sustainable development of resources and environment.

A key challenge in the development of standards is how to effectively strengthen and standardize business processes within an enterprise using appropriate standardization measures. To solve this problem, organizations need to develop a complete set of standard control procedures. These procedures should cover all areas of their business operations. Ensure that every step of the business process is considered and properly managed.

An important element of this approach is the effective optimization of business processes. This can be done with a block card or a full written statement. We use graphics as a visual aid channel to provide a simple and easily accessible overview. Written descriptions deepen ardhi with a clear understanding of processes, roles and responsibilities. That's what we want. Infinite group refers to a form of networking for better value and better communication within an organization. Employees at all levels make the job easier and contribute to a better understanding of the entire process.

This systematic approach is considered one of the most effective ways of managing corporate governance. Organizations can streamline workflows by integrating standardized management processes into their operational framework. Integration not only simplifies volatility, but also increases efficiency overall. As such, it contributes to the coherence of tasks by ensuring that every

employee follows the same standards and guidelines. The quality and reliability of production have been greatly improved.

Organizations can respond effectively to changes in the business environment by regularly reviewing and updating their ongoing management procedures. They are better able to adapt to market demands and technological advances. This future-oriented strategy promotes continuous improvement of business processes as well as innovation and adaptability in the organization. It is essential to design and implement a fully standardized control process, which provides a solid foundation for standardizing effective business processes. This increases the productivity of enterprises and the competitiveness of the market.

The warehouse provides companies with an overview of warehouse management. In this section, tasks for different roles are defined, the duration of the loop is given, and specific tasks are described in detail, which are described in the form of blocks. Seeing a complex visualization tool that simplifies and standardizes. This improves performance and guarantees clear accountability throughout the organization. The successful implementation of these standards will give companies the opportunity to improve their internal governance. They can meet the needs of environmental protection, sustainable development and economic efficiency.

Once introduced through standardization, there is a need for systems to collect and track data. These systems are critical to achieving sustainable improvements. They ensure that standards are regularly raised as the business evolves and economic conditions change. This flexible approach to management enables organizations to remain adaptable and adaptable in a competitive environment. It also enhances their long-term sustainable growth capacity, enabling them to better meet future challenges.

The main purpose of developing standardized systems is to provide effective support for the production, operation and management objectives of the company. Standardization is not just about creating a comprehensive framework; A dynamic, adaptable, open, science-based system must be built. By continually applying, evaluating, and further developing these standards, organizations can ensure that they are closely related to their practices. This strategy is very useful in improving the overall efficiency of the organization.

Regular assessment of the effectiveness of standardized systems is critical to business. Such assessment should include the accuracy of the test standards in each area and their applicability. The organization should conduct market research and needs analysis in order to quickly identify areas for improvement. It is essential to take into account the changing needs of stakeholders. They should systematically assess potential risks and opportunities. With careful analysis, the company can develop practical solutions and improve overall efficiency by seamlessly integrating them into a standard system. Through mechanisms for continuous improvement, organizations can ensure that their standards remain relevant and valuable. This adjustment is necessary if we are to remain competitive in a changing market. By effectively linking process analysis to the development of existing systems, companies can develop the necessary flexibility to solve their problems from the outside. This strategy not only improves operational efficiency, but also improves the quality of management. An action-oriented and standardized approach is essential to achieving sustainable development. This approach aligns with the organization's long-term strategic goals. Businesses can manage the complexity of their industry and maintain high levels of productivity.

5. Conclusion

The integration of business analytics and business operations is critical to creating robust frameworks and rules for standard systems. Integration addresses the gap that often arises between standard functionality and organizational functionality. By streamlining business processes and

converting them to formal standards, businesses can standardize their workflows more effectively and significantly improve their operational efficiency. This approach emphasizes the importance of standardizing business management. It ensures that the prescribed standards are closely aligned with practical applications. During the implementation phase, the analysis process identifies key factors that help produce clear and relevant criteria to improve the effectiveness of controls. This strategy focuses on goal-oriented processes and standardized structures that allow the company to react quickly to rapidly changing markets at the same time. The creation of data observation and feedback systems allows for the continuous optimization of standards and ensures that they are compatible with the growth of organizations and changing market conditions. On the whole, this method has important reference significance in practice, and can effectively improve the management level and market competitiveness of enterprises.

References

- [1] Gu N, Cai Z, Zhao S. *Research on the Evaluation System of Digital Management Process Improvement of Automobile Transaction Business Based on CMMI* [J]. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 2024, 32(04):535-569. DOI: 10.1142/S0218488524400087.
- [2] Sui L, Huang Q, Liu X. *Research on Safety Investment Decision Evaluation and Optimization of Network Booking Taxi Platform Enterprise based on Subjective-Objective Assessment Method* [J]. *Technical Gazette*, 2023, 30(4): 1201-1208.
- [3] Zhao W, Li R, Liu C Z L. *Construction Method of Digital Twin System for Thin-Walled Workpiece Machining Error Control Based on Analysis of Machine Tool Dynamic Characteristics* [J]. *Machines*, 2023, 11(6).
- [4] Si Y D, Yuan B, Su S, et al. *Research on Combination Optimization Method of Equipment Maintenance Task Package based on Maintenance Cost Analysis* [J]. *Highlights in Science, Engineering and Technology*, 2023. DOI: 10.54097/hset.v35i.7042.