

Discussion on the Problem Diagnosis and Optimization of Business Process

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Abstract—This paper discusses the diagnostic method of process problem based on the experience of traversal experience, and clarifies the basic requirements of process traversal method. For the process through the discovery of the problem, can be summarized as a process structure defects, lack of supporting mechanisms and support system missing three categories. This paper analyzes the business urgency - expected return matrix scoring method, and the application method can effectively sort the importance of the problem process. The implementation method and key elements of process optimization are discussed, and the evaluation index system of process optimization effect is constructed. Through continuous customer-oriented business process optimization work, can effectively improve the quality of the operation of the process, and continuously enhance the level of business operations management.

Index Terms—business process, process traversal, optimization mode, evaluation index

I. INTRODUCTION

In 1990, Dr. Michael Hammer of the United States firstly proposed the concept of business process reengineering (BPR), and introduced it into the field of western business management [1]. Since then, the business process management principles, management system and process reengineering theory and other aspects of the increasingly academic attention [2,3,4,5,6]. Strengthen the process management, especially the effective implementation of process optimization, to enhance the operational efficiency and efficiency of enterprises, and thus enhance the level of business operations management is of great significance [7,8]. Process optimization is from the enterprise performance, the existing business process analysis and improvement [9]. Compared with process reengineering, its implementation is relatively difficult. Enterprises through the occasional process optimization work, can effectively solve the problems in the operation of the process.

In order to carry out the process optimization work, some scholars have explored the relevant theories and practices of process optimization. For example, Johannsen et al. [10], based on Lean Six Sigma (6σ) theory, established a business process optimization logic model. Cao Qinglin [11] applied theory of Constraints (TOC) and its standardization methods to explore how to optimize the process of scientific research management in colleges and universities. Daly et al. [12] explored the impact of process optimization on the performance of service innovation. Lloyd et al. [13] pointed out that in

the process optimization process, we should pay attention to the effective communication between the members of the organization and the sharing of relevant documents. Xiong Yuanbin [14] analysis of manufacturing enterprises in the implementation of business process optimization projects in the implementation of knowledge management methods, and so on.

Scientific organization of the implementation of process optimization work, is the process optimization should be effective prerequisite. This paper constructs the process of passing through the organization as the main form, which can effectively discover the problems of the process. At the same time, the priority ranking method of problem flow optimization is analyzed, and the concrete implementation method and key elements of process optimization are discussed in order to obtain the overall benefit of process optimization and better support the operation and development of the enterprise.

II. BASED ON PROCESS THROUGH THE FLOW OF THE PROBLEM ANALYSIS METHOD

A. Process through the experience of the way

By using the experience of the process through the way, can quickly find the process of the problem. The process is to let the business process makers, managers, supporters, etc., to the role of ordinary process performers, directly to the production line or customer contact level for field experience, thus more intuitive and more profound understanding of the existence of the process problem. Process through the post can be included, the department through, the customer through several levels. Posts through, the relevant management personnel, especially in the leadership of the managers, by breaking the boundaries of the original responsibilities to participate in the work of front-line staff to work in the form of job experience, understand the specific circumstances of the implementation of the process to understand the process in the The operation of the different positions between the departments through the relevant management personnel mainly through on-site observation, multi-party discussion, cross-departmental process experience, transposition role play, break the boundaries of the department, standing in different sectors of the perspective of transposition to understand The process of cross-sectoral operation; customer traversal, the relevant management staff mainly through customer interviews, case discussions, customer play and on-site office and other forms, standing on the customer's

perspective transposition thinking, understanding of customer demand and customer satisfaction for business process evaluation. Different through the form, suitable for different types of processes, Table 1 lists the characteristics of several major through the way.

Business managers should always visit the front line of production and market management services front line, select the appropriate process through the way to the identity of ordinary employees to experience the relevant tasks, and truly feel the actual operation of the process.

TABLE I.
SEVERAL MAJOR PROCESS THROUGH THE CHARACTERISTICS OF THE WAY

Serial number	Method	Key Steps	Process Characteristics	Advantages	Disadvantages
1	observe experience	as spectators, observe, record, inquiry, summary	The appropriate process scope is wide	Easy to operate	The pressure on the observer is large, not necessarily reflect the objective reality of the process
2	Roles play	Assign the role, the actual operation, the analysis summary	Mainly suitable for business and service processes, especially with customers in contact with the process	Those who pass through can have a real experience	Process through the program design is more complex
3	Multilateral discussion	Interview planning, organization of interviews, records, summary	A wide range of suitable processes, especially integrated management processes	Easy to operate	The subjective comments of the interviewer have a significant impact on the process and improvement proposals
4	Case discussion	Case preparation, topic setting, discussion, record, summary	The appropriate process scope is wide	A typical or individual problem in the process can be effectively reflected	The representative choice of the case has a great influence on the judgment and improvement of the process problem

B. The basic requirements of the process through

Process through the staff to change the concept of service, from the customer's point of view to observe the existing process. Before going through to clear through the work of the task, the key processes involved in the relevant departments and front-line staff to focus on the initial understanding of the status of the process, do the preparatory work. On this basis, the development of process through the activities of the overall objectives and work plans, a clear process through the activities of the team members, the development process through the task manual. According to the process of crossing the task requirements, earnestly through the activities. Process through the experience of the scene to be objective and real, can not make any deliberate arrangements or disguise to ensure that through the staff can get real information to understand the real situation. Process through the staff should be as independent as possible through the task, to ensure access to first-hand information.

Enterprise managers at all levels should be based on job characteristics, and actively participate in the process through the activities, and fully feel the production and operation of the front line of the status quo. In the process of crossing, follow the arrangements for on-site staff, to comply with disciplinary requirements, timely processing

process through the record. Process through the process, to the needs of customers, from the perspective of systematic management of the process, in the enterprise within the framework of the entire process analysis of the operation. Process involved departments and related personnel to the process of cross-activities to give strong support, and to strengthen communication between each other to ensure that the process through the activities to achieve the desired effect.

In short, process traversal activity is a good way to effectively discover process problems. In order to better access the process of running the problem, and process to complement the activities of the activities, enterprises should also establish a diversified process problem acquisition channels. For example, through the contact with the customer interface to understand the existing process problems, the formation of customer feedback mechanism; the use of enterprise process management forum, so that employees in a timely manner to reflect the actual work encountered in the process of the formation of employee feedback mechanism; through process management information Platform to monitor key processes, timely detection of related process problems, and so on.

C. Classification of process problems

Through the process of crossing and other methods, a

comprehensive understanding of the problems in the process, refining the formation of a list of process problems. In general, the existing problems of the process include the steps between the steps and steps of the process, the redundancy of the process links, the dislocation of the process links, the lack of clear responsibility for the process links, the lack of process implementation codes, the lack of process support system, and so on. For the process of the problem, should be combined with corporate organizational structure and departmental responsibilities, a clear responsibility to solve the department, the formation of the process of responsibility matrix.

This paper argues that, although process problems may vary, and process problems in different areas have their own characteristics. In general, process problems can be summarized as process structure defects, lack of supporting mechanism and lack of support system. The defects of the process structure, including the lack of process steps or unreasonable processes caused by the process is not smooth; supporting mechanism defects, including process specifications, standards and related systems caused by the lack of problems; support system defects, including related (See Table 2) for the lack of automated operation, lack of IT support systems, or associated defects.

TABLE II.
THE MAIN PROBLEM CLASSIFICATION OF THE PROCESS

Latitude	Concrete content
Flowsheet structure	Whether the process link is redundant, whether there are activities that can be reduced or repeated; Process can be related to the relevant aspects of parallel processing, whether through the task rearrangement to reduce the run time; The process of the various aspects of the task is clear, links between the smooth connection, the interface is clear.
Supporting mechanism	Whether the operational requirements and the capability requirements of the process link match; Process trigger start (end) of the conditions are clear, link input (output) requirements are clear; Whether the process participant can obtain the information needed to complete the task in a timely and comprehensive manner; The responsibilities and responsibilities of the process link, whether the division of responsibilities of the participating departments (personnel) is clear and reasonable; Whether the basic principles (relevant systems) followed by the process are clear and the standards and norms of the implementation process are unfounded; Whether the control requirements of the key nodes of the process are clear; Whether the process key indicators (including the time threshold of the process link) are set appropriately
System support	Whether the process using the IT system to be cured; Whether the relevant aspects of the use of automated operation and the relevant information collection, sharing and statistics; Process information transmission, running data analysis whether the IT system support; Whether the establishment of an IT monitoring system to monitor the operation of the process

III. THE OPTIMIZATION OF BUSINESS PROCESSES

A. Process optimization priority ranking method

It is important to sort the importance of the process in question. At present, the performance performance-importance matrix method, the degree of demand - the degree of preparation analysis and the optimization difficulty-effect analysis method are usually used to identify and define. Deutsche Telekom put forward the business urgency - expected revenue matrix score screening method, this paper has been refined on the sub-method. Among them, the urgency is divided into three dimensions, followed by the degree of customer satisfaction, the extent of departmental feedback urgency and the degree of impact on business development. The three points of the dimension are added and the urgency score is obtained. The expected income is divided into three dimensions, followed by the time of the process operation, the degree of quality improvement and the degree of cost reduction. The scores of the three dimensions are added to Expected earnings score. High

urgency, the expected return is also high problem process, is the need to first optimize the process.

B. Implementation elements of process optimization

The process of enterprise process can be solved by ESIA method, including Eliminate, Simplify, Integrate and Automate. To eliminate the non-value-added activities of the process, delete the redundant links in the process activities, the parallel processing of the links to be processed in parallel; the relevant activities of the process as much as possible to simplify the process-related elements can be reduced; The use of a variety of equipment and information systems to replace the artificial, so as to improve the speed of the process, and improve its stability.

In the process optimization process, we must attach importance to "hardware elements", but also attach importance to "software elements." "Hardware elements" include the facilities, equipment, processes, resources and related organizational elements of the matching process. The "software elements" mainly include the operation mode of the process, the mode of resource allocation, the

responsibilities of personnel division and the corresponding operation and management methods. "Hardware elements" and "software elements" of the reasonable combination and effective coordination, in order to ensure the smooth operation of the process and play its due effect.

Process optimization process, but also need to clear the relevant departments of the division of labor responsibilities. Process optimization departments can be divided into: process centralized management, process departments and process participation departments. Among them, the centralized management department from the process of systematic management perspective, from the overall height to control the process optimization work. Process responsible departments and process participation departments should work closely with each other to improve the efficiency of process optimization.

C. Evaluation of process optimization results

For the optimized process, after a period of time, an

interdepartmental virtual team should be set up to evaluate its operation. The evaluation should include several aspects of process operation cost, time, quality and risk control (see Table 3 for specific indicators). In general, through process optimization, to ensure further reduce the operating costs of the process, reduce enterprise resource consumption and improve the operational efficiency of the process; run time, should shorten the business processing time and improve service timeliness; to improve the quality, to ensure that the process High-quality operation, and in some way for customers to "increase the value" to better meet and exceed customer service expectations; risk control, should be through the appropriate process key control points set up to reduce operational risk, to ensure that business Operation is more secure and reliable, and so on. If the above indicators can reach their target value, indicating that the optimization of the process to achieve the desired results.

TABLE III.
PROCESS OPERATION EVALUATION INDICATOR LATITUDE

latitude	index	state
quality	income	Refers to the impact of the operation of the process on the operating income of the enterprise
	satisfaction	Refers to the direct impact of process operation on customer satisfaction within the firm and the indirect impact of external customer satisfaction
	error rate	Mainly measure the impact of process operation on the associated error rate in internal operations management and customer service
	risk management and control	Mainly measure the impact of process operation on the risks associated with internal operations management
time	efficiency	Mainly to measure the duration of the operation of the process and the internal operation and management related to the impact of efficiency
cost	cost	Mainly measure the impact of process operation on the associated costs in the internal operations management process

IV. CONCLUSION

Through the business process through the experience, can help enterprise management and staff in-depth understanding of the process of understanding the process of running the existing problems. The process should be classified analysis, clear its key optimization point, the use of appropriate measures to be addressed. For the optimized process, to strengthen the normalization of process indicators monitoring. After a period of operation, the process should be scientifically evaluated for its effectiveness. On this basis, the process is continually optimized to ensure that the process runs to the desired goal.

In short, process optimization is the repositioning of process value, which is a rebalancing of the relationship between process quality, efficiency, cost, and risk. Through the effective process optimization work, and constantly improve the process of systematic management capabilities, can better improve the

efficiency and quality of the operation process, reduce operating costs, enhance customer satisfaction, thereby enhancing the core competitiveness of enterprises, better support enterprises To achieve the development of strategic objectives.

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